THE INDO-ORIENTAL GENUS *DRUPADIA* MOORE (LEPIDOPTERA : LYCAENIDAE)

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Pp. 281–356; 6 *Plates*, 15 *Text-figures*

BULLETIN OF
THE BRITISH MUSEUM (NATURAL HISTORY)
ENTOMOLOGY Vol. 29 No. 6
LONDON : 1974

THE BULLETIN OF THE BRITISH MUSEUM (NATURAL HISTORY), *instituted in* 1949, *is issued in five series corresponding to the Departments of the Museum, and an Historical series.*

Parts will appear at irregular intervals as they become ready. Volumes will contain about three or four hundred pages, and will not necessarily be completed within one calender year.

In 1965 *a separate supplementary series of longer papers was instituted, numbered serially for each Department.*

This paper is Vol. 29 *No.* 6 *of the Entomological series. The abbreviated titles of periodicals cited follow those of the World List of Scientific Periodicals.*

World List abbreviation
Bull. Br. Mus. nat. Hist. (Ent.)

TRUSTEES OF
THE BRITISH MUSEUM (NATURAL HISTORY)

Issued 25 *January*, 1974 Price £4.90

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CONTENTS

SYNOPSIS

Fifteen species are placed in the genus *Drupadia* Moore, 1884, which until recently has wrongly been referred to as *Marmessus*. Centred on Borneo, they range to Sumatra, Burma and Vietnam, with outliers in Sikkim, Java, Sulawesi and the Philippines. All named forms are discussed, and keys are provided to the species and subspecies. Two new species from Borneo and nine new geographical subspecies are described, including four for *Drupadia rufotaenia* (Fruhstorfer) which more than double its known range. One preoccupied name is replaced. All species are illustrated, as are the male genitalia of the thirteen whose males are known. Cross-references are given to the illustrations of Seitz (1926) and a systematic list is appended.

INTRODUCTION

It was forecast (Cowan, 1966 *a* : 105)[1] that the species here dealt with would be

[1] Opportunity is taken here to note that I attributed (Cowan, 1966 *a* : 109, 136 last line) the name *Papilio triopas* to Cramer. The author was Stoll. The tribal names were introduced as follows; Horagini Swinhoe, [September] 1911 (and Moulton, December 1911 as Horagaria), and Cheritrini (Cheritraria) Moulton, December 1911 (and Swinhoe, [March] 1912). Earlier, Swinhoe, 1910 (8 : 11) listed both these names but without either diagnosis or included genera. I omitted two figure references in 1966; on page 124 for *Horaga samoena* Grose-Smith, insert Grose-Smith, 1902 (Oriental Lycaenidae): 14, pl. 25, figs 11, 12, and on page 134 for *Horaga selina* Grose-Smith, insert Grose-Smith, 1902 (Oriental Lycaenidae): 15, pl. 25, figs 14, 15. Furthermore, *Horaga onyx* Moore, [1858] and *Ticherra acte* Moore, [1858] should be so dated and not 1857.

Finally (Cowan, 1967 : 95), the locality Liwa (? Miva) was in doubt. Although found on no other maps up to a scale of 1/1 million, it is boldly marked on map 20 of Macmillan, 1964, *Atlas of south east Asia* (92 pp., 4°. London & New York). Liwa is 5°03′S., 104°11′E., at the head of the valley about 30 kilometres north east of Krui. My quotation came from Doherty's Diary, of which extracts were published by Hartert, 1901 : 498, and 'Miva' must, as suggested, have been a transcription error.

treated as a tribe, the 'Marmessini', as distinct from the Horagini and the Cheritrini which tribes I wrongly claimed as new. However, after discussion with Lt-Col. J. N. Eliot (*in litt.*), whose reclassification of the world Lycaenidae is now in press, I agree that they should comprise the genus *Drupadia* Moore, as a member of the Cheritrini. The name *Marmessus* Hübner is not applicable to Lycaenidae (Cowan, 1966 *b*).

ABBREVIATIONS

The material here examined is all in the National Collection at the British Museum (Natural History), London, unless otherwise stated. Where reference to this collection is necessary, the abbreviation BMNH is used. Other collections are named in full, preceded where appropriate by the abbreviation 'coll.'

ACKNOWLEDGEMENTS

This study was commenced in 1954, when the National Collection was still divided between the BMNH in London and the Rothschild Museum at Tring, and Mr N. D. Riley, C.B.E., then Keeper of Entomology, most generously allowed me the privilege of bringing the specimens together for the first time. His ready help, and the assistance of Mr G. E. Tite at Tring, and Mr N. H. Bennett and Mr T. G. Howarth, B.E.M., in London, were invaluable.

Army service prevented progress for ten years. When I retired at the end of 1964 to stay near Tring, both Mr Tite and Mr Bennett were there, with all the Lycaenidae and the magnificent Rothschild Library. Mr J. P. Doncaster, C.B.E., the new Keeper, allowed me to enjoy all facilities there, and the Horagini and Cheritrini were dealt with.

Further delay with problems of nomenclature and bibliography supervened; then Mr Tite and Mr Bennett retired, all the insects and books were removed to London, the Museum was demolished, rebuilt and rearranged, and the whole Sub-department of Ornithology, under Dr D. W. Snow, occupied the premises. By now Dr P. Freeman had taken over as Keeper of Entomology, and he and Dr Snow most kindly arranged for me to remain at a table at Tring with the *Drupadia* collection, to complete this paper. During the transition, Miss Susan May was constantly helpful.

Meanwhile loans of specimens had accumulated. First, a paratype sent by the Director of the Rijksmuseum van Natuurlijke Historie, Leiden, then another from the Sarawak Museum, Kuching, discovered there by Dr G. H. L. Rothschild, and then some select specimens from Col. J. N. Eliot, Mr G. C. Stubbs, Dr T. Norman, and Mr J. A. Hislop, M.C. Next, with the help of Mr E. Taylor, a new species was found in the Hope Collection and an extended loan arranged by kind permission of Dr G. C. Varley, the Hope Professor, University Museum, Oxford. Finally, in a small collection made by Capt. J. Smeaton Stuart, no less than four fresh specimens of another unnamed species were found, which he kindly presented to the collection.

To all these, for their valued advice and ready help, and for their patience, I

would like to express my warmest gratitude, and to add my sincere apologies for the time taken to produce a result.

TOPOGRAPHICAL NOTES: SUMATRA AND BORNEO

The area occupied by *Drupadia* is compact. Five species are known only from Borneo – Kalimantan, two only from Sumatra and the Malaysian Peninsula, and one only from Thailand – Vietnam. These countries, together with Burma, have a further six species in common, one of which penetrates north-west to Sikkim and four south-east to the Philippines. One of the last four reaches Java and another Sulawesi. The fifteenth species is known only as an unique female from a small island in the Straits of Malacca. A surprising feature of the distribution is that, although well established in Sumatra and the islands west of it, none of the genus is found in the well collected Nicobar and Andaman Islands in the north. Perhaps as remarkable is that only one species is reliably known from Java.

Sumatra and Borneo, two of the largest six islands in the world, and both bisected by the equator, are of great interest in studying this genus. Sumatra (Text-fig. 1) stretches over 1000 miles along the edge of the Indian Ocean, from which it rises steeply throughout its length in the folded Barisan mountain range, with its many peaks above 3000 metres high. Beyond that range it drops to a long, low-lying plain. Its orientation from north-west to south-east leads to some difficulty in locality description, one recent paper touching on the genus placing Krui, best described as in the south or south-west, as being in 'west Sumatra' on one page and in 'south east Sumatra' on the facing page. Too often, the inadequate 'Sumatra' has been given as a locality, and careful recording is essential.

The main features and few collected localities of Sumatra, and the oceanic islets west of it, are shown in Text-fig. 1. Knowledge of the west coast leaves much to be desired. Raffles's great collections were lost at sea in 1824. Horsfield concentrated on Java (but see below, p. 306) and little else was done there in the next sixty years. Wallace virtually ignored the island, making a brief excursion from Palembang at the end of his tour. Then Kheil (1884) made Nias a fashionable collecting ground after his three-year sojurn there, and only recently has attention been turned to the other islands. Martin lived at Medan in the north-east, and his home drew most of the other collectors, notably de Nicéville (butterflies) and Hartert (birds). These all confined their activities to the north-east sector, with excursions into the eastern slopes of the Battack mountains, the local portion of the Barisan range. Thus the west coast of Sumatra, the most interesting part, has been largely neglected.

Also shown in Text-fig. 1 are the subspecies of *Drupadia ravindra* (Horsfield) so far known from Sumatra. They are exceptionally well differentiated, and seven occur in the western slopes and islets. By contrast, on crossing the watershed, the entire inland plain appears to be populated by the same subspecies as flies throughout peninsular Malaya and much of west and north Borneo-Kalimantan.


Ranong
Condor
Medan
Angsa
Natuna
Simeulue
Tioman
Babi
Sibolga
Nias
Penrissen
Telo
Equator
Batu
Lingga
Padang
Siberut
Bangka
Sipora
Pagai
Palembang
Belitung
Bengkulu
Enggano
Krui
Western subspecies of Drupadia ravindra
Oceanic islets;
Oceanic coast;
Adjacent areas;
serunica
esla
corbeti
caesarea
sumptuosa
boisduvalii
batuna
banka
connexa
janus
ravindra
Sheltered forests;
moorei
Scale (1 inch: 225 miles)
0
500 km.
Area covered. 11°N – 8°S; 95 – 112° E
Land in Sumatra above 400 metres shaded

Sumatra has no peculiar species. Its interest lies purely in the marked subspeciation along its oceanic strip.

Borneo-Kalimantan is quite the opposite. No less than five of the fifteen species here discussed are peculiar to it, and whereas at least four different subspecies of *D. ravindra* fly there, their territories intermingle and three of them radiate to neighbouring countries. This island is mainly low lying, with hills more gradual and more evenly distributed than those of Sumatra. Its remote hinterland appears to be both a clinocentre for subspeciation and a reservoir for the development of obscure species.

Modern improved means of access may afford fuller material and fresh knowledge. This should result in considerable deductions on the evolution not only of the species but also of the region itself.

SEITZ REFERENCES

At least a third of the species and subspecies are illustrated in colour by Seitz, and, as his work is generally available and almost universally consulted, full references are given in all cases. Owing to Fruhstorfer's untimely death in April 1922, Seitz himself had to compile the relevant section of the text from his notes four years later. This inevitably led to a few unfortunate mistakes, which are pointed out.

Even so, the errors cannot all be so excused. While the text did not appear until 1926 (which date is here cited throughout), the plates, on which all figures are named, for all the Lycaenidae (pls 141–162) except two (pls 146B, 150B) had been published by June 1922, and Fruhstorfer must have seen them in preparation. The plates applicable to *Drupadia*, and the month in which each was published, are: pl. 146 (May 1915), 147 (November 1921), 156, 158 (February 1922), 159 (May 1922) and 146B (November 1927).

DRUPADIA Moore, 1884

Drupadia Moore, (30 June) 1884 : 31. Type-species: *Myrina* [*Thecla*] *ravindra* Horsfield, by original designation.

Drupadia (Moore ms.) Distant, (August) 1884 : 233, 236. Type-species: *Myrina* [*Thecla*] *ravindra* Horsfield, by original (: 237) designation.

Biduanda Distant, (August) 1884 : 233, 233n., 237. Type-species: *Myrina thesmia* Hewitson, by original designation. [Subjective synonym.]

[*Marmessus* Hübner; Nicéville, 1890 : 429n. Type-species: *Papilio lisias* Cramer, by subsequent designation (Scudder, 1875 : 212). Misapplication.]

Drupada Moore; Piepers, 1918 : 105. [Erroneous spelling.]

The name *Marmessus* Hübner was incorrectly introduced and widely used from 1890 onwards. Its type-species, *Papilio lisias* Cramer, is a neotropical Riodinid.

FIG. 1. Sumatra; to show the oceanic coast and offshore islets, the manifold Barisan Range, the sheltered lowlands, and the main collected localities; with neighbouring lands and some key place names.

It did not include *P. lisias* Fabricius, which is a subjective synonym of *Thecla ravindra* Horsfield (*v.* Cowan, 1966 *b*).

Biduanda, whose type-species possesses fore wing vein 9, and *Drupadia* (or '*Marmessus*') which lacks it, were both employed for separate genera until Riley (1942 : 88) synonymised them, as occasional individuals of *D. ravindra* do possess vein 9 and confusion had arisen because they had been described as new species of *Biduanda*. The latter name remains available should it ever be required.

External characteristics. *Drupadia* has the same head and antennae, smooth eyes, and palpi with smoothly adpressed scales and naked, long porrect third segment, as in *Cheritra*.

The wings (Text-figs 2–11, the veins numbered as in Text-fig. 10) have the cells slightly longer than both *Cheritra* and *Horaga*, being at least half as long as the costa. The hind wing tail at vein 2 is shorter than in *Cheritra*, *Eooxylides* and *Neomyrina*, being never longer than the costa. The shorter tails at veins 1 and 3 are as in *Cheritra*, although that at vein 3 may be reduced. The tails differ from those of *Horaga* in being more robust, ciliate laterally, and white with a black centre instead of black with a white ciliate apex.

The fore wing differs from *Cheritra* in having vein 9, when present, very short, its origin well beyond the end of vein 10 instead of at or before it. In *abnormis* female (Text-fig. 4, male unknown) vein 5 originates close to vein 6 (as in *Neomyrina*), instead of midway between veins 4 and 6. In many species the male dorsum is strongly lobed in the basal two-thirds.

The hind wing veins are as in *Cheritra*. Males of several species, however, have the costa lobed near the base, and vein 8 short. This is particularly evident in *cineas* (Text-fig. 9).

Male insignia are found in variety, from none at all up to three together of the following, according to species.

Fore wing underside with a dorsal fringe	–	*cinderella*
Fore wing upperside with a discal 'brand'	–	*cinesoides*
Fore wing underside with a dorsal 'brand'	–	*achaja*, *ravindra*, *cineas*, *cinesia*, *cinesoides*
Hind wing upperside with a sub-basal 'brand'	–	the above six, plus *theda*, *scaeva*

There are none in the remaining five of the thirteen species whose males are known. The considerable variety suggests that some of the species have evolved over a long period. Insignia are undoubtedly connected with courtship, and thus are essentially diagnostic of species and only occasionally and incidentally indicative

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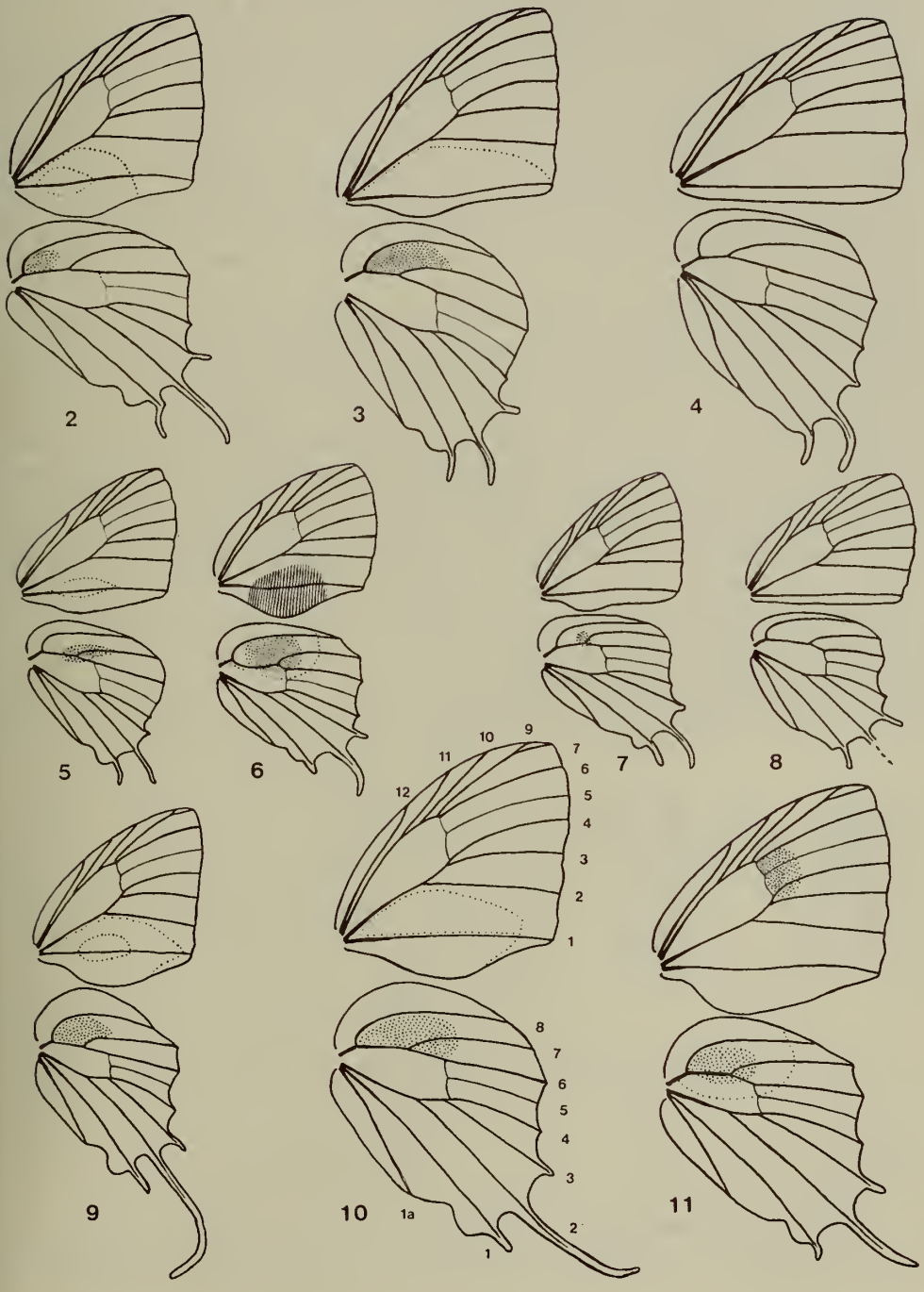
Figs 2–11. Wing diagrams of *Drupadia* males (4, 8, females).

2, *ravindra*; 3, *theda*; 4, *abnormis* ♀; 5, *achaja*; 6, *cinderella*; 7, *scaeva*; 8, *araotina* ♀; 9, *cineas*; 10, *cinesia* (showing notation); 11, *cinesoides*.

Notes. Sexual insignia shown on the fore wing disc and on the hind wing are on the uppersides; those on the fore wing dorsum, including the fringe on *cinderella*, are on the undersides. Scale: approximately twice natural size.


2
3
4
5
6
7
8
9
10
11
12
1
1a
2
3
4
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6
7
8

of genus. They are usually explained as scent holders or diffusers. I have for long associated the fore wing discal 'brand' (familiar in Strymonidi) with the antennal club, which can be brought into contact with it when the wings are closed. This 'brand' may be for polishing, scenting, powdering, or even electrifying the antennae, possibly of the courted female but more probably of the suitor male. Although I have found no favour for these ideas, no plausible alternatives have been offered. Field studies of courtship behaviour in Lycaenidae are most desirable.

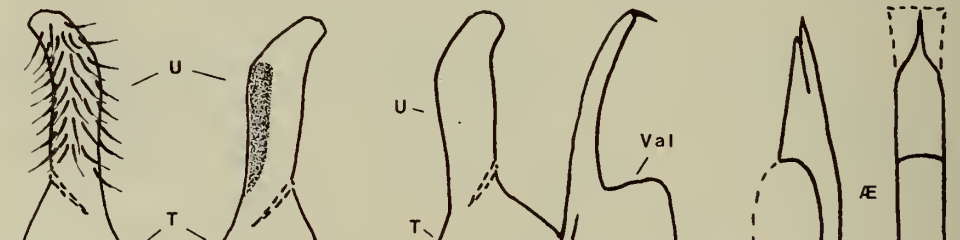
Male genitalia (Text-figs 12–15). The male genitalia are unique, and diagnostic for the genus. The *vinculum* (Vin) forms a complete, very narrow ring, dorsally free as a narrow bridge, laterally fused to the twin halves of the tegumen, and ventrally flattened and upturned like a saddle. This saddle is presumably a modification of the saccus.

The distinctive *tegumen* (T) is separated into two triangular halves, each bearing apically an elongate digital half *uncus* (U), which is more (in *rufotaenia*) or less hirsute and is marked on its dorsal face with a dark brown stigma. Gnathoi and socii are lacking.

The *valvae* (Val) are seated on the vinculum saddle. Each has a large basal sacculus which may be elliptic (as in *rufotaenia*) or triangular, and the costa is extended forward (cephalad) in a *costal arm* (CA) and rearward (caudad) in a long tubular *style* which terminates in a peculiar down-turned spicule. The proximal arch of the saddle and the bases of the valvae, assisted by the costal arms, apparently replace the absent juxta.

The *aedeagus* (Æ), loosely slung between the costal arms, is apically tapered, sometimes recurved ventrad, and contains a vesica which, when fully everted, is of flared cylindric, or campanulate, shape.

The whole apparatus is of very simple appearance and, as Mr Bennett remarked



Figs 12–15. Male genitalia of *Drupadia rufotaenia*.

12, Ventral aspect of dorsum; 13, Lateral aspect from left of right tegumen, uncus and valva; 14, Aedeagus, lateral aspect; 15, Aedeagus, ventral aspect. U, uncus; T, tegumen; Vin, vinculum; Val, valva; CA, costal arm; Æ, aedeagus.

on seeing the first, it is sometimes difficult to tell 'which way round it goes'. The thirteen known species are illustrated on Pls 5, 6, at approximately the same scale as was used for the Horagini (Cowan, 1966 *a*), but one third less than that used for the Cheritrini (Cowan, 1967), with their comparatively tiny equipment. Terms italicised above are used in the text below.

Generic diagnosis. The diagnostic characters of the genus are, primarily, the unique structure of the male genitalia; the narrow vinculum and the split tegumen and uncus. Externally, it may be identified by the absent vein 8 and very short or absent vein 9 of the fore wing, and the medium length of the tail at vein 2 of the hind wing.

Discussion. Certain features of the genus call for comment. First, its varied composition. Two species are included, *araotina* and *abnormis*, of which only females are yet known. Their undersides have striking similarities (Pl. 2, figs 45, 51). They appear best placed here at present, but the latter, so well named and with some affinities to *Iraota*, will undoubtedly require a new genus when the male is found. Next, *achaja*, with its monstrous genitalia (Pl. 5, fig. 99) and peculiar minor characters, could almost certainly be separated generically. Its early stages should be interesting. Another isolated and rather anomalous species is *cinesia*, with genitalia (Pl. 6, fig. 111) closest to those of *ravindra* (Pl. 5, fig. 100) but tending, like its pattern, towards *Cheritra*.

Very similar to *cinesia* in appearance, but with the more usual large genitalia, are *cinesoides* and *johorensis*. Another distinctive pair, *cinderella* and *cindi*, superficially recall *Eooxylides* on the underside, but they have less robust tails and other differences. Each of these pairs consists of a larger, sexually dimorphic, species with male insignia, and a smaller species, less dimorphic, in which both sexes resemble the female of the larger.

These pairings recur as a characteristic of most of the genus. The classic example is in *ravindra* and *rufotaenia*; the former twice the size and dimorphic, the latter resembling in both sexes, in each of the varied subspecies, a miniature female of it. Their genitalia (Pl. 5, figs 100, 101) are vastly different in this case, the smaller species carrying twice the armature of the larger. Exactly parallel, except that the genitalia are less distinct, are *theda* and *niasica*. The remaining three species in the genus are *estella* and *scaeva*, a rather anomalous pair, and *cineas* which appears to be solitary.

Finally there is the phenomenon of dwarfs, which occur in both sexes of the dimorphic species. Dwarf females often can be confused with the female of the smaller species of the pair. So can dwarf males, because they lose their dimorphism and their insignia progressively with decrease in size. Again, the best example is *ravindra*, whose normal male upperside (Pl. 1, figs 16–27) has a more or less black fore wing and a blue hind wing. In dwarfs the hind wing becomes progressively darker until in extremes (Pl. 2, fig. 42) only a few shining blue scales remain. At the same time the fore wing lobe and the hind wing brand become obsolete. But the genitalia remain, both in size and shape, unaltered. So an extreme male

dwarf, if it can surmount the handicap of lacking insignia, should successfully pair with a normal female of its own species.

Unless this is borne in mind, it is very easy to mistake a dwarf *ravindra* for a *rufotaenia*. Dwarf *theda* may similarly be confused with *niasica*, especially in the Philippines, where the latter is larger than it is elsewhere. In examining the BMNH series of female *D. theda* from the Philippines, several examples of each sex of *D. niasica* were discovered. There is inadequate material to warrant further deductions, and field study is needed. *D. cineas* is an interesting species, affording a complete range of forms, from the large bright blue male with lobed wings to the tiny dark brown dwarfs with no insignia (Pl. 4, figs 85, 86), through all intermediates (fig. 87), while the black and white female (fig. 88) remains unchanged in pattern whatever the size.

Early stages. Only one species has been described in its early stages. The accounts are incomplete. Piepers (1918 : 105, pl. 27, figs 168c) in the Philippines and Morrell (1956 : 105, pl. 18, fig. 1) in Singapore each reared *D. ravindra* from wild larvae, which appear to have about six triangular dorsal projections on the median segments, and to be green and purplish brown, turning to grey dorsally and pink laterally when mature. Foodplants were *Eugenia densiflora* (Myrtaceae) in the Philippines and *Derris scandens* (Leguminosae) in Singapore. Corbet (1956 : 351) gives *Albizzia falcata* (Leguminosae) for the same species. The pupa is brown, attached anally (Morrell), shoe-shaped and [surely in error] 'fastened by a girdle-thread' (Piepers, copied by Seitz).

Key to the Species of *Drupadia*

(All figure references are to Pls 2–4 for specimens, Pls 5 and 6 for genitalia.)

The underside and the male upperside vary. Except in *D. achaja* the female upperside is constantly dark brown with a subtornal white or bluish white area on the hind wing (figs 41, 48, 88), but the fore wing may bear an ovate orange discal patch. Superficial characters are keyed first, followed where applicable by differences in male genitalia. Fore wing vein 8 is always absent.

1 Fore wing normally lacking vein 9 2
– Fore wing vein 9 present, short 7
2 Underside pale purple-grey with an indistinct reticulate pattern recalling certain *Arhopala* (fig. 44).
Male genitalia large, aedeagus sinuate and valvae evenly tapered to the abrupt apex and long spicule (fig. 99). (Thailand and S. Vietnam only)
D. achaja (Fruhstorfer) (p. 294)
– Fore wing underside ochreous; hind wing underside mainly white marked with dark brown and black (figs 52, 53, 83), or ochreous marked with black and white (figs 51, 58, 92) 3
3 Hind wing underside white, chequered to base; immediately separable from others so marked (see 9 below) as the postdiscal spot in space 6 is shifted inwards level with that in space 7 (figs 52, 65). Unci curve ventrad (figs 100, 101) (*Drupadia* proper) 4

– Hind wing underside broadly ochreous at base (figs 45, 58). Unci straight or upcurved as usual 5

4 Much larger, but genitalia smaller; fore wing 18–21 mm. Male with brands and lobed wings (except dwarfs). Sexually dimorphic. Hind wing underside seldom with a reddish line in space 1 internal to the submarginal markings and continued into space 2 (figs 49, 52). Valvae small, basally tapered (fig. 100) ***D. ravindra*** (Horsfield) (p. 295)

– Half the size, but genitalia larger; fore wing 10–12 mm. Male without insignia. Sexes alike. Hind wing underside usually with the innermost subtornal line across spaces 1 and 2 deep orange-red or concolorous with the fore wing (figs 61–68) Valvae basally elliptic, the style from the dorso-caudal edge (fig. 101) ***D. rufotaenia*** (Fruhstorfer) (p. 314)

5 Hind wing underside brown, with narrow white lines separating the darker discal line and the black zig-zag postdiscal and submarginal markings (fig. 58) . . 6

– Hind wing underside base broadly, and apex narrowly, ochreous brown; remainder white with irregular dark spotting (fig. 45) . . . ***D. araotina*** (Evans) (p. 321)

6 Larger; fore wing 12–14 mm. Male upperside black with the tornal half of the hind wing shining bright blue; female similar but dark brown and whitish. Male with the wings strongly lobed, a long black fringe under the fore wing dorsum, and a hind wing brand . . . . . ***D. cinderella*** sp. n. (p. 319)

– Smaller; fore wing 10–11 mm. Male upperside entirely dark brown, obscurely shot with purple except at the margins; female as last but the tornal third of the hind wing dull bluish grey. Male without insignia. . . . ***D. cindi*** sp. n. (p. 320)

7 Hind wing underside chequered or spotted 8

– Hind wing underside with the basal half unmarked; white with postdiscal and terminal black stripes (figs 96–98) 12

8 Hind wing underside with the basal half unspotted, being white with a sharply defined area concolorous with the dark ochreous fore wing, lying above a line from the base of vein 1 to mid costa; the outer half white with prominent irregular black and dark brown spotting (fig. 51) . . . ***D. abnormis*** (Moulton) (p. 321)

– Hind wing underside with the usual chequered markings to the base; the postdiscal quadrate spots in spaces 7, 6 and 5 are in echelon (figs 53, 60, 73) (*Biduanda* proper) 9

9 Underside markings on both wings clear, even and regular. Male genitalia relatively compact; valvae with the costal arm oblique, and with a distinct shoulder on the ventral edge before the base of the style; aedeagus short and blunt . . 10

– Underside markings irregular and uneven. Male genitalia longer, overall length twice the depth; valvae with the costal arm as usual, in line with the dorsal edge, and not with a shoulder below the style; aedeagus long and apically tapered . 11

10 Larger; fore wing 16–20 mm (to 23 mm in Sulawesi). Sexually dimorphic; male upperside deep purple-brown with a terminal black line and usually at least the bases of veins 2 to 4 coloured red on the fore wing (fig. 50). Male genitalia very short, the length scarcely exceeding the depth (fig. 104) ***D. theda*** (C. & R. Felder) (p. 322)

– Smaller; fore wing 11–15 mm (to 17 mm in Philippines). Sexes alike or nearly so; upperside dark brown, often with a purple wash and occasionally with orange discal patches on the fore wings (figs 69–72). Male genitalia longer, overall length about 1·5 times the depth (fig. 105) . . . ***D. niasica*** (Röber) (p. 333)

11 Larger; fore wing 13–18 mm. Underside with the markings browner; the apical half of the fore wing costa is darkened, and the cell end bar and the postdiscal band both emanate from the dark area (fig. 60). Male upperside as *theda* but with narrow dark brown terminal borders (fig. 57) . . ***D. estella*** (Hewitson) (p. 339)

Smaller; fore wing 11–15 mm. Underside fore wing costa white to beyond the cell, with the cell-end line (faint in Burma) or bar standing well clear of the postdiscal band (figs 77–84). Male upperside black, with the tornal two-thirds of

the hind wing bright shining blue and the costa often orange; the fore wing may be plain (Burma–Thailand, fig. 78) or bear a discal patch which is white (Sikkim, fig. 77) or shining blue (Malaysia southwards, fig. 79) . ***D. scaeva*** (Hewitson) (p. 341)

12 Smaller; fore wing not over 17 mm. Upperside male shining blue with black borders (fig. 85; but tending in dwarfs to plain dark brown, figs 86, 87), with a white subtornal spot in space 1; female, as in the remaining three species, dark brown with a white subtornal band across spaces 1 to 3 or 4 but, unlike them, with the veins crossing it black (figs. 88). Male genitalia long and delicate, the valvae smoothly tapered to the base of the style (fig. 108) ***D. cineas*** (Grose-Smith) (p. 345)

– Larger; fore wing over 17 mm. Upperside male purple or dark brown; female with the white subtornal band unmarked. Male genitalia robust, the valvae basally ovate 13

13 Male upperside bluish purple. Hind wing underside with the subtornal line across space 1 between the white postdiscal band and the blue metallic scales plain black. Male genitalia small, resembling those of *ravindra* (fig. 111) ***D. cinesia*** (Hewitson) (p. 348)

– Male upperside pinkish purple or dark brown. Hind wing underside space 1 with the first subtornal stripe beyond the white postdiscal band red. Male genitalia large as usual 14

14 Larger; fore wing 18–20 mm. Sexually dimorphic, the male upperside purple. Fore wing underside, as last, bright ochreous-orange. Male fore wing upperside with an oval brand (as in *Ritra*) about the cell end (fig. 93). Base of tegumen and base of valva subequal (fig. 109) . . . ***D. cinesoides*** (Nicéville) (p. 347)

Smaller; fore wing 17–18 mm. Sexes alike, as female of last two (fig. 94, ♂). Fore wing underside distinctly paler than last two, only bright ochreous along the extreme termen. Male without insignia. Tegumen attenuate, its base narrower than the base of the valva (fig. 110) . . ***D. johorensis*** (Cowan) (p. 348)

Discussion of the species and subspecies

Drupadia achaja (Fruhstorfer)

(Text-fig. 5; Pl. 2, figs 40, 44; Pl. 5, fig. 99)

Horaga achaja Fruhstorfer, 1912 : 233. Holotype ♂, THAILAND (see text).
Horaga achaja Fruhstorfer; Riley & Godfrey, 1925 : 141, pl. 3, fig. 1.
Horaga achaja Fruhstorfer; Seitz, 1926 : 982, pl. 158, fig. a9.

Fore wing veins 8 and 9 are absent. The hind wing tornus is as usual produced up to vein 3, with short tails at veins 1, 2 and, in the female only, 3, being rounded at the end of vein 3 in the male. Differs from *Horaga* Moore in the longer fore wing cell, which here exceeds half the fore wing costa and the length of vein 12.

Male with sooty black brands, on the fore wing underside about most of the basal half of vein 1, and on the hind wing upperside about the basal half of vein 7.

Male genitalia large, abnormal. Unlike *Horaga* the vinculum is short and narrow, set more vertically than obliquely in the abdomen, with the tegumen and uncus, and the valvae, consequently nearly perpendicular to it instead of acutely inclined. Tegumen triangular, broad-based, long and isosceles; the unci dilate before the thin upcurved apical blades. Valva substantial, long, evenly tapered to the abrupt downturned spicule; costal arm short, inclined towards the dorsum. Aedeagus very stout, sinuate, with depressed apex.

Upperside of male dark brown, with a dark purple suffusion in the discal areas which is

extensive on the fore wing, restricted on the hind wing; and a small ovate white patch about the fore wing cell end. Female larger, paler overall, and with the white patch larger.

Underside of both sexes dull greyish brown, the male obscurely washed with lilac; with finely etched black, white-edged lines in pairs, forming catenulate transverse bands; median, postdiscal and marginal, and at the hind wing cell end; the fore wing cell end marked with a small white patch.

Fore wing length: ♂ 12–13 mm, ♀ 15–16 mm.

An isolated little species, geographically and anatomically, which will probably merit a separate genus. Fruhstorfer's single male was from Hin Lap, a small railway halt (next to his Muok Lek locality), 120 km north-east of Bangkok. Godfrey independently discovered both sexes in the Me Song forest 40 km north of Phrae in north Thailand, and extended the range within five years to Da Lat in South Vietnam. The only other recorded locality, Chaiyaphum, is 230 km north-east of Bangkok, central to the first three, and all are at an altitude of about 300 metres.

Fruhstorfer must have dissected the holotype, for it was the accidental discovery of his preparation (Fruh. 4148) in the BMNH which led to the investigation of the Horagini and the transfer of this species to *Drupadia*. The whereabouts of the holotype itself, which Seitz presumably used for his illustration, is not known. It was probably damaged, as Seitz shows it with an extra tail at vein 3, as usual in these genera.

MATERIAL EXAMINED.

Horaga achaja Fruhstorfer, holotype ♂, genitalia preparation only (Fruh. 4148), no data [THAILAND: Hin Lap, 14°40'N., 101°5'E., 300 m, i. 1900 (*Fruhstorfer*)].

THAILAND: 4 ♂, 2 ♀ (including ♀ 'allotype' designated by Riley & Godfrey, 1925), Me Song, iv. 1916 (*Godfrey*); 1 ♂, Chaiyaphum, i. 1931. SOUTH VIETNAM: 1 ♀, Da Lat [no date, presented 1921] (*Godfrey*).

All in BMNH.

Drupadia ravindra (Horsfield) comb. rev.

(Text-figs 1, 2; Pl. 1, figs 16–39; Pl. 2, figs 42, 46, 49, 52; Pl. 5, fig. 100)

Thecla ravindra Horsfield, 1828 : pl. 1, figs 11, 11a, explic. p. 1.

Upperside of male fore wing velvet-black, hind wing blue; female dark brown, with a narrow pale blue-grey subtornal suffusion on the hind wing.

Underside of fore wing basally white, outwardly orange, brownish grey, or grey, with a dark basal streak, bars mid-cell and at cell-end, postdiscal band and submarginal line; hind wing apex washed with the fore wing colour and with the usual black tornal spots and metallic blue scaling, the remainder, from base to termen, pure white with prominent square black chequered markings.

That basic pattern varies subspecifically as follows (Pl. 1).

The upperside of the fore wing may have a discal orange patch, which may cover most of the wing or may show only as a rosy flush; sometimes the base may be blue (male) or grey (female). The hind wing may vary in tint (male), or in the extent and shade of the pale subtornal area (female).

On the underside the fore wing ground colour may be the same in both sexes or it may differ;

the hind wing markings sometimes become brown or orange, and may be reduced to parallel pairs of short lines instead of solid squares.

The best known species of the genus, this is probably also the most interesting. It would certainly repay research. The interrelationship of its extraordinarily diverse subspecies, the regular occurrence of dwarf individuals, and the significance of the separate sibling species *rufotaenia*, are its most intriguing aspects. Material is needed from the many unworked areas. Only cursory attempts at breeding it have as yet been made.

The first two subspecies discussed are very lightly marked on the hind wing underside, and there is more orange than black on the upperside of the fore wing. In the 100-mile stretch of the Kra Isthmus, between 10° and 8½°N., a quite spectacular change occurs from the Burmese *boisduvalii* just described to the Malayan *moorei*, which has a boldly marked underside and the fore wing above plain black. No one has yet explored this small area.

The diversity of the seven subspecies in the oceanic zone of Sumatra has already been noted (Text-fig. 1), in striking contrast to the uniformity east of the watershed, where the same *moorei* ranges the length of the island as well as throughout the Malay peninsula and Borneo-Kalimantan. Here it appears to cover the northern and western lowlands, to the Sabah border at least, territory which also seems to be occupied by *lisiades*. For lack of information I continue to treat this as a good subspecies. It has a small orange patch and might be submontane, or possibly an inland intermediate towards the vividly orange *fulminans* of the south and east Kalimantan coasts, reaching east Sabah; but the unique blue shade of its male hind wing should be noted.

Sabah appears to comprise a remarkable *clinocentre*, where at least two other subspecies fly together, Dr T. Norman having confirmed earlier records by taking series of *surindra* (perhaps submontane) and *joloana* near Tawau in the same month of 1961. Individuals of *ravindrina* have also been taken, by more than one collector, in east Sabah. This does not prove the existence of different species; *ravindra* is ecologically sensitive, and the reasons for this seeming polymorphism must be sought. Local geological faults, microclimates in this exposed corner of the island, the attentions of 'different kinds of ants' in the early stages, and temporary re-invasions from the Sulu Archipelago (by *joloana*) and from Palawan (by *ravindrina*) may be suggested.

To the south and east, in the Philippines, the chequered markings on the underside are reduced again; not to the faint outline pattern of the north-western races, but to small black dots. A new subspecies is proposed for Mindoro where this reaches an extreme.

This is the only species yet known from Java and Bali, where there is some evidence of slight seasonal variation. Such variation is found otherwise only in Burma, where again it is slight compared with that of many other Rhopalocera. This seasonal stability of *ravindra*, compared with its geographical polymorphism, suggests some inherent reason for it not having penetrated north of Burma. Altitude also affects it slightly, chiefly causing greater size and brighter colour, but these effects are of varietal rather than of subspecific order. Another trait,

found in *moorei*, is that specimens from small islands like the Langkawi, Tioman and the Natunas, tend to have a greenish tint to the blue hind wing of the male, while the female hind wing tornal area is a bluish grey. The point is noted as needing investigation of its cause rather than the creation of further subspecies.

Dwarfs of *ravindra* (Pl. 2, figs 42, 46) can easily be mistaken for normal *rufotaenia* (figs 43, 47), whose 'red ribbon' is not an infallible guide, since that subtornal band is often pale rufous in the former and may be dark in heavily marked specimens. Male dwarf *ravindra* can best be diagnosed by the presence of at least some residual shining blue scales on the hind wing upperside, but females can be very difficult. Intermediate-sized specimens seem equally rare in collections, but perhaps some are involuntarily discarded as undersized. Dissection of males leaves no doubt; their genitalia are normal *ravindra*, much smaller than, as well as differently shaped from, *rufotaenia* (Pl. 5, figs 100, 101). Corbet (1956 : pl. 16, fig. 242) used a dissection (ASC 253) of an extreme dwarf of mine from Singapore without comment to illustrate *ravindra*, placing immediately below it (fig. 247; ASC 252) his preparation from my Singapore *rufotaenia*, but those figures are not to scale and so the size difference is lost. Presumably, if the dwarf male can overcome the handicap of lack of insignia, his courtship of a normal-sized female will be successful. Presumably also, a dwarf male *ravindra* could not measure up to the requirements of a similar-sized female *rufotaenia*.

Rearing of *D. ravindra moorei* in Singapore was carried out with wild larvae by Morrell (1956, repeated 1957), but he recorded few details. One specimen 'bred' by him is in the BMNH and is a heavily marked extreme dwarf female, indistinguishable from *rufotaenia*. To my enquiry, he replied (*in litt.*, 1967) that he had reared only three or four specimens from larvae found at different times on the same foodplant, and had noticed nothing abnormal. In his paper he noted that the larvae were constantly attended by ants in the wild, but they were 'not essential apparently to their well-being, as I have taken half-grown larvae and [reared] them into normal-sized imagines'. It seems possible, nevertheless, that deprivation of ants may cause dwarfing.

Careful distinction is needed between rearing, from collected ova, larvae or pupae, and breeding, which should imply mating between known parents followed by rearing *ab ovo* to maturity. The latter is, clearly, the more valuable.

Key to Subspecies of *D. ravindra*

(Pl. 1, figs 16–39; Pl. 2, figs 49, 52)

1 Fore wing underside ground colour orange in both sexes 2
– Fore wing underside ground colour other than orange in one or both sexes . . 10
2 Fore wing upperside with an orange discal patch 3
– Fore wing upperside normally without an orange patch 8
3 Hind wing underside with the dark discal and postdiscal quadrate spots obsolescent; only the inner and outer edges marked, by pairs of brownish lines. (Burma to Vietnam) (fig. 30) 4
– Hind wing underside with chequered black markings on white 5
4 Hind wing underside with the outline markings nearly black. The orange area on

the fore wing upperside is restricted to an oblique band across the central third of the wing, from near mid-costa to near tornus. The blue hind wing upperside of the male has a distinct pale greenish tint in the distal half
rav. corbeti nom. n. (p. 299)

– Hind wing underside markings paler, orange-brown. The orange area on the fore wing upperside is most extensive, usually leaving only the narrow dark borders and apex, and sometimes recurring on the hind wing disc. The male hind wing upperside is black above vein 7, and below it shades from dark blue to light blue at the tornus, with an overall reflection which is deep violet when viewed from the rear, but pale grey when viewed from in front (figs 18, 30)
rav. boisduvalii Moore (p. 300)

5 Fore wing underside clear orange. Male hind wing upperside deep blue or purple, with the costa black above vein 6 6

– Fore wing underside in the male lightly suffused grey in the disc; the basal third white and the dorsal space white below a broad blackish streak along vein 1. Male hind wing upperside bright blue, with the costa mainly white. (West coast, north Sumatra) (figs 17, 29) . . . . . ***rav. esla*** (Swinhoe) (p. 303)

6 Fore wing upperside with the orange patch ovate and oblique, diffuse, and the veins across it marked black. (Banka Is., S.E. of Sumatra) . ***rav. banka*** (Riley) (p. 309)

– Fore wing upperside with the orange patch quadrate, the longer axis parallel to the dorsum, and clearly defined. (Borneo, Kalimantan) 7

7 Fore wing upperside with the orange patch small, about one quarter of the wing area, and outwardly diffuse. Male hind wing upperside dark blue without strong reflections. . . . . ***rav. lisiades*** (Fruhstorfer) (p. 310)

Fore wing upperside with the orange patch large, two thirds of the wing area, clear and unsullied. Male hind wing upperside rich deep purple-blue, strongly shot with deep violet (figs 19, 31). . . . ***rav. fulminans*** (Staudinger) (p. 311)

8 Male hind wing upperside shining blue with an obscure violet reflection when viewed from above or to the rear, but dull grey seen from in front; the costa black in space 6 to white in space 8. Female hind wing upperside, as in all species hitherto, with the subtornal quarter pale bluish grey. (Malay peninsula, E. Sumatra, W. & N. Borneo and Kalimantan) (figs 22, 34) . ***rav. moorei*** (Distant) (p. 302)

– Male hind wing upperside uniform shining purple-blue at all viewing angles, and costa above vein 7 grey. Female upperside very dark brown, with a narrow blue subtornal line. (Palawan to Philippines) 9

9 Fore wing underside only slightly paler orange than normal. Hind wing underside with the black markings normal or only slightly reduced
rav. ravindrina (Staudinger) (p. 313)

– Fore wing underside pale creamy orange. Hind wing underside with the black markings much reduced (Mindoro) (figs 49, 52) . ***rav. resoluta*** subsp. n. (p. 313)

10 Fore wing underside ochreous grey in the male; pale ochreous in the female. Hind wing upperside uniform blue with a dark margin in the male; dark brown in the female with the tornal third very pale greyish white. (Sabah, ? submontane) (figs 23, 35) . . . . . ***rav. surindra*** (Druce) (p. 311)

– Fore wing underside either whitish or strongly coloured 11

11 Fore wing underside white with the termen pale ochreous. Smaller than usual (Jolo Is.) (figs 27, 39) . . ***rav. joloana*** (Staudinger) (p. 312)

– Fore wing underside coloured 12

12 Fore wing underside deep orange, heavily suffused dark grey in the male; orange in the female. (West coast of south Sumatra, and the oceanic island chain) . . 13

– Fore wing underside dark grey or chololate-grey. (Java to Lombok) . . . 18

13 Fore wing upperside with the base dark as usual 14

– Fore wing upperside with the base blue in the male, and (except *janus*, *sumptuosa*) overlaid with pale grey in the female 16

14 Male hind wing upperside with the costa above vein 6 mainly solid black (Telo) (figs 20, 32) . . . . . ***rav. batuna*** (Riley) (p. 305)
– Male hind wing upperside with the costa mainly white 15
15 Male hind wing upperside with the basal third suffused with black (Simeulue) ***rav. serunica*** (van Eecke) (p. 304)
– Male hind wing upperside bright blue to the base (Mentawei Is.) (figs 24, 36) ***rav. connexa*** (Riley) (p. 305)
16 Fore wing upperside with a large orange patch (Nias) (figs 16, 28) ***rav. caesarea*** Weymer (p. 304)
– Fore wing upperside without a prominent orange patch; at most a dull diffuse one (S.W. Sumatra) 17
17 Male upperside shining blue, the fore wing with narrow costal and terminal borders and the apical third black. Female upperside dark brown, the fore wing with at most a trace of an orange discal spot, the hind wing with the tornal half greyish blue (figs. 21, 23). . . . . ***rav. sumptuosa*** (Toxopeus) (p. 306)
– Male fore wing upperside black, with a small round subbasal blue area and beyond it a smaller ovate reddish discal patch which is suffused with black and often obsolete. Female as last, but the subtornal pale area is smaller and less blue (figs 25, 37) . . . . . ***rav. janus*** (Riley) (p. 306)
18 Seasonally variable in size and appearance. Fore wing length 16–20 mm. Male hind wing upperside with the blue area extensive in large specimens; in smaller ones it at least fills most of spaces 5 and 6, and reaches the termen in space 3. Female fore wing underside perceptibly browner than that of the male (figs 26, 38) . . . . . ***rav. ravindra*** (Horsfield) (p. 307)
– More constant. Fore wing 15–17 mm. On the male hind wing upperside the costal and apical black area fills most of spaces 5 and 6 and, sharply tapering, forms a narrowing border round the termen and tornus. Female fore wing underside darker, the sexes almost identical in colour . . ***rav. balina*** (Fruhstorfer) (p. 309)

Drupadia ravindra corbeti nom. n.

Papilio lisias Fabricius, 1787 : 65, no. 615. 1 ♂, 1 ♀ syntypes, South Vietnam (BMNH) [seen]. [Primary homonym of *Papilio lisias* Cramer, 1777.]
Hesperia lisias (Fabricius); Fabricius, 1793 : 261, no. 12.
Papilio lisias Fabricius; Donovan, 1801 : [44], pl.[40], fig. 1, ♂.
Papilio lisias Fabricius; Westwood, 1842 : 60, pl. 44, fig. 1, ♀.
Drupadia lisias (Fabricius); Waterhouse, 1886 [Feb.] : pl. 165, figs 2, ♂, 3, 3a, ♀.
Biduanda lisias (Fabricius); Moore, 1886, [Nov.] : 42 n.
Marmessus (*Drupadia*) *lisias* (Fabricius); Nicéville, 1890*a* : 429 n., 430.
Papilio lisias Fabricius; Corbet, 1941 : 101.

Papilio lisias Cramer is a South American Riodinid. Corbet pointed out the homonymy of the Fabrician name but did not replace it. To commemorate his careful researches into the Linnean and Fabrician names I here propose the replacement name *Drupadia ravindra corbeti* nom. n.

The appearance is described in the key. The two original, and only known specimens, in the Banks collection, BMNH, are in very brittle condition. I have seen them under glass, but would not handle them.

As several early authors noted, Donovan's figures were not up to his usual standard, but Waterhouse provided excellent ones. He also correctly identified the type-locality.

In the original description Fabricius gave the date 'Pulicandor, Mus. dom. Banks', varied in his next work to 'Poulicandor, Mus. dom. Banks'. For a long time the name was used to cover Burmese specimens (see the next subspecies), until in 1886 both Waterhouse and Moore noticed the differences. Moore located *lisias* in 'Pulo Kondul, in the Nicobar Islands', and Waterhouse was overlooked. Nicéville followed Moore. Fruhstorfer (1912 : 248) rediscovered Condor, but Seitz (1926 : 989) was confused. Finally Corbet put the matter beyond doubt.

Pulo (poulo, pulau, etc.) means Island, and although now little known, P. Condor (8°41'N., 106°36'E.) in former times was on most maps. It was an established landfall (visited by Marco Polo) on the Europe – China voyage via Cape of Good Hope – Sunda Strait – Canton. Linnaeus's senior pupil, Christopher Tärnström died there in 1846 on his way from India to China. Relevant to *Papilio lisias*, the *Resolution* and the *Discovery* anchored there from 21 to 28 January, 1780 for wood, water, and meat on the hoof, ready for the long passage home. The collectors went ashore there several times. No other landings were made in the region until, having passed P. Tioman and negotiated the Bangka Strait, they anchored off Krakatoa [Rakata] and Prinsep [Panaitan] islands before crossing the Indian Ocean. In 1967, while stationed at Saigon, Major A. Bedford Russell visited P. Condor to seek fresh specimens, but saw none. The jungle there is now much reduced. An old name for P. Condor recently reintroduced is Con Son.

As noted under *D. r. boisduvalii* below, specimens of that subspecies from continental South Vietnam approach the appearance of *corbeti*, but they do not attain the differences given in the key.

Material examined.

Papilio lisias Fabricius, 1 ♂, 1 ♀ syntypes, South Vietnam: Pulo Condor [i. 1780] (BMNH).

Drupadia ravindra boisduvalii Moore **comb. rev.**

(Pl. 1, figs 18, 30)

[*Myrina lisias* (Fabricius); Godart, 1824 : 593, no. 2.]
[*Myrina lisias* (Fabricius); Boisduval, 1836 : pl. 22, fig. 2, explic. p. 6.]
[*Myrina lisias* (Fabricius); Doubleday, 1847 : 21.]
[*Myrina lisias* (Fabricius); Butler, 1870 : 184.]
[*Hypolycaena lisias* (Fabricius); Moore, 1879 : 833.]
Drupadia boisduvalii Moore, 1884 : 31. LECTOTYPE ♂, Burma (BMHN), here designated [examined.]
Biduanda boisduvalii (Moore); Moore, 1886 : 42.
Drupadia boisduvalii Moore; Nicéville, 1890*a* : 430, pl. 29, fig. 230 (adding at : 429 n., 'should be *Marmessus* Hübner').
[*Marmessus lisias* (Fabricius) syn. *boisduvalii* (Moore); Swinhoe, [13 Feb.] 1912 : 191, pl. 740, figs 1, 1a, 1b. Misidentification.]
Marmessus lisias boisduvali (Moore); Fruhstorfer, [Apr.] 1912 : 248.
Marmessus lisias boisduvali (Moore) f. *alcira* Fruhstorfer, 1912 : 248. Type-material, Burma (not located).

Marmessus boisduvali (Moore); Seitz, 1926 : 989, pl. 159, fig. c4.
Marmessus boisduvali (Moore) f. *alcira* Fruhstorfer; Seitz, 1926 : 989, pl. 159, fig. d5. [Misidentification of f. *alcira*.]
Marmessus ravindra boisduvali (Moore); Corbet, 1948 : 102.

Godart located his specimen from 'la presqu'île en deçà du Gange', perhaps the same as Boisduval's 'Bengale'. Boisduval's actual specimen appears to be in the BMNH, labelled '*lisides* Boisd., Sylhet' in ms. on stiff card; '*lisias* Fab.' in ms.; '*Myrina lisias* Bdv., *Species G'al.*, pl. 22, fig. 2' in ms.; and 'Ex Musaeo Dris. Boisduval' on a printed label, ex coll. Oberthür. Butler gave the locality 'Barrackpur', which is in India, West Bengal, and close to the former specimen from the border of Indian Assam and Bangladesh. This may represent an earlier distribution but was more likely the base from which the collectors operated. Certainly Nicéville was positive that the northern limit of the species was the 'Chittagong Hill Tracts', on the border between Bangladesh and Burma.

Moore was the first to detect differences between *lisias* [*corbeti*] and the continental form, and he cited Boisduval's figure in describing both sexes of *boisduvalii*, adding 'Moulmein; Mergui; in colls. Moore and Mus. Calcutta'. In the BMNH Type Collection are a male and a female, both ex coll. Moore, labelled as '♂ Type' and '♀ Type' of *boisduvalii* Moore. Of these syntypes I now designate the male as lectotype of *boisduvalii* Moore.

There is little seasonal variation in this subspecies, the only one in which appreciable changes might be expected. Some dry season specimens have small orange discal spots or bars across spaces 4 and 5 on the hind wing upperside, the orange of the fore wing paler and more extensive, and the underside markings faint. Moore's female syntype is like this. The figure called *alcira* by Seitz is simply a rather small and dark female, and does not represent Fruhstorfer's dry season form, of which no type-material has been located.

The upperside and underside markings gradually become slightly darker through Thailand to South Vietnam, approaching but not attaining the appearance of *corbeti*. A specimen ex coll. Fruhstorfer is labelled 'Tay Ninh, Cochin China' [South Vietnam, 90 km north-west of Saigon], and '*lisias euthydemus* Fruh. Type'. It is a normal male for the area, and the name probably remains unpublished because Fruhstorfer considered the specimen transitional. The north-eastern limit of the range of the species in continental Asia is uncertain.

Material examined.

Drupadia boisduvalii Moore, lectotype ♂ [Burma]: Moulmein.

Paralectotypes. 1 ♀ [Burma]: Moulmein; 1 ♂ [? Bangladesh]: 'Sylhet' (ex coll. Boisduval).

Burma: 9 ♂, 10 ♀, Karen Hills; 36 ♂, 17 ♀, Toungoo-Rangoon; 250 ♂, 143 ♀, Moulmein – Mergui. Thailand: continental, 17 ♂, 11 ♀; peninsular, down to 10°N., 6 ♂, 13 ♀. Laos-South Vietnam: 4 ♂, 3 ♀.

Note. 1 ♀, 'Chusan, Mongolia'. Perhaps mislabelled from Mergui, *c.* 1842 (*T. E. Cantor*). Cantor served in Penang as a surgeon for the East India Company

after he returned from the 1840–1841 expedition to Chusan Islands, near Shanghai (not Mongolia).

Drupadia ravindra moorei (Distant) comb. rev.

(Text-fig. 1; Pl. 1, figs 22, 34; Pl. 2, figs 42, 46)

Sithon moorei Distant, 1882*a* : 246. Type-material, West Malaysia: Province Wellesley (not located).
Drupadia moorei (Distant); Distant, 1884 : 236, fig. 68, pl. 20, figs 20, 21, [? 30].
Biduanda similis Druce, 1895 : 616. Holotype ♂ Borneo (BMNH) [examined]. **Syn.n.**
Marmessus moorei (Distant); Nicéville & Martin, 1896 : 481, no. 487.
Marmessus moorei sumatranus Fruhstorfer, 1912 : 272. Type-material, Indonesia: N.E. Sumatra (not located). **Syn. n.**
Marmessus moorei sumatranus Fruhstorfer f. *battakana* Fruhstorfer, 1912 : 272. Holotype ♀, Indonesia: N.E. Sumatra (BMNH) [examined]. **Syn. n.**
Marmessus moorei nola Fruhstorfer, 1912 : 250. Holotype ♂, Brunei (BMNH) [examined]. **Syn. n.**
Marmessus lisias moorei (Distant); van Eecke, 1914 : 256.
Marmessus moorei (Distant); Seitz, 1926 : 989.
Marmessus similis (Druce); Seitz, 1926 : 990.
Marmessus sumatranus Fruhstorfer; Seitz, 1926 : 989, pl. 159, figs f7, f8 [nec f5, f6 = *thesmia*].
Marmessus battakana Fruhstorfer; Seitz, 1926 : 990.
Marmessus nola Fruhstorfer; Seitz, 1926 : 990.
Drupadia (*Marmessus*) *ravindra mola* [sic] (Fruhstorfer); Barlow, Banks & Holloway, 1971 : 293.

Described in the key and figured on Pl. 1. Distant's type-material has not been located. His figures all show vein 9 present on the fore wing. Druce's specimen was described as a *Biduanda* because it definitely has vein 9, an abnormality which would not debar *similis* Druce from priority over the name *nola* Fruhstorfer in Borneo, should synonymy with *moorei* Distant not be admitted. No type-material of *Marmessus sumatranus* Fruhstorfer has been found.

In the north of Sumatra and of West Malaysia, and particularly in Penang [Pulo Pinang], the fore wing upperside often has definite traces of an orange patch in the disc, but no constant distinction can be found between the general populations of eastern Sumatra and the adjacent mainland. For such specimens from Penang and from the Battack mountains west of Medan the name f. *battakana* Fruhstorfer may be retained. They are in fact respectively intermediates to the subspecies in Burma and *D. rav. esla* Swinhoe of western Sumatra.

There is an interesting tendency on smaller islands for the male hind wing upperside to develop a greenish tint. Examples have been seen from Langkawi, Tioman and Natuna islands, and it is evident in Condor.

The only other notable variation is that of dwarfing. An extreme dwarf male from Singapore is figured (Pl. 2, figs 42, 46) alongside a male *D. rufotaenia* from the same place for comparison, although the latter is very heavily marked below. The residual shining blue area on the hind wing upperside of the former distinguishes it.

Material examined.

Biduanda similis Druce, holotype ♂, 'Borneo' [?East Malaysia; Sabah] (ex coll.

Rev. R. P. Murray in original description). *Marmessus moorei sumatranus*, f. *battakana* Fruhstorfer, holotype ♀, INDONESIA: N.E. Sumatra, Battack Mountains (*L. Martin*). *Marmessus moorei nola* Fruhstorfer, holotype ♂, BRUNEI, 1890 (*Waterstradt*).

THAILAND: Nakhon Si Thammarat [8½°N.] and southwards, 3 ♂. WEST MALAYSIA: Langkawi Is, 4 ♂, 2 ♀; Penang, 9 ♂, 23 ♀; Perak to SINGAPORE: 62 ♂, 71 ♀; Tioman, 2 ♂, 2 ♀ (in coll. G. C. Stubbs). INDONESIA: N.E. Sumatra; Medan to Battack Mts, 37 ♂, 38 ♀: Palembang, 2 ♂, 2 ♀; Lingga Is, 2 ♀; Natuna Is, 3 ♂, 3 ♀; Kalimantan, Pontianak, 1 ♀, Sintang, 1 ♀, Pulo Laut, 1 ♂. EAST MALAYSIA: Sarawak to Sabah, 27 ♂, 15 ♀.

Note. 1 ♂, 1 ♀, 'Minahassa, Celebes' (ex coll. Staudinger); 1 ♂, 'Macassar, Celebes (*Halliburton*)'; and 1 ♂, 'Jolo' (ex coll. Fruhstorfer), are probably faulty labels.

Drupadia ravindra esla (Swinhoe) **comb. n.**

(Text-fig. 1; Pl. 1, figs 17, 29)

[*Marmessus boisduvalii* (Moore); Nicéville & Martin, 1896 : 481, no. 488.]

Biduanda esla Swinhoe, [13 Feb.] 1912 : 190. Holotype ♂ INDONESIA: Sumatra (BMNH) [examined; fore wing vein 9 absent].

Marmessus lisias iskander Fruhstorfer, [April] 1912 : 249. Type-material, INDONESIA: West & N.E. Sumatra (not located). [Synonymized with '*cala* Swinhoe' by Riley, 1944 : 266.] **Syn. n.**

Marmessus iskander Fruhstorfer; Seitz, 1926 : 989, pl. 159, figs c7, c8.

[*Marmessus comla* (Fruhstorfer ms.) Seitz, 1926 : 989, 1014, pl. 159, figs c5, c6. Misidentification.]

Seitz ignored both *esla* Swinhoe and *comla* Swinhoe (for the latter see below under *caesarea* Weymer), and his figures of *iskander* are excellent for *esla*. His figures of '*comla*', which he listed (p. 1014) as a new Fruhstorfer ms. name, represent transitions towards form *battakana* Fruhstorfer. There are several such specimens in the BMNH ex coll. Martin, who lived and collected on the plains round Medan, sending collectors into the Battack Mountains (Nicéville & Martin, 1896 : 357–361), and who supplied Fruhstorfer. They include all intergrades from normal *moorei* Distant to near *esla* Swinhoe.

Fruhstorfer's *iskander* type-material has not been found.

The range of *esla* as now known is the 450 km stretch of the western slopes of the Barisan mountain range, from just north of Sibolga to just south of Padang, or between 3°N. and 1°S.

MATERIAL EXAMINED.

Biduanda esla Swinhoe, holotype ♂, INDONESIA: 'Sumatra' (in original description), (*Sachs*) (ex coll. Swinhoe; Crowley bequest).

INDONESIA: Sumatra, 1 ♂, 1 ♀, 'C.M.B.' [? central Battack Mts.]; 1 ♀, Sibolga; 2 ♀, Sumatra (*Sachs*); 1 ♀, Sumatra; 5 ♀, Padang Sidempoean [1°25'N., 99°15'E.]; 1 ♂, 1 ♀, Batang Proepoe, Padang Bovenlanden (*van der Poll*).

Drupadia ravindra serunica (van Eecke) **comb. n.**

(Text-fig. 1)

Marmessus lisias serunicus van Eecke, 1914 : 255, fig. 5; pl. 4, fig. 5. Type material, INDONESIA: Simeulue Is. (not located).

Simeulue is the northernmost of the offshore island chain to the west of Sumatra. This subspecies is close to *esla* from the nearby coast of the latter, and entirely distinct from *caesarea*, found on the neighbouring island of Nias.

Van Eecke was the first to examine the genitalia of the species, and to recognise that the forms which, for instance, Fruhstorfer two years earlier had grouped under *lisias*, with the orange patch, *moorei* with no patch but still orange on the fore wing underside of both sexes, and *ravindra* with a dark grey underside, together with several which he could not allot, were really all conspecific. The Simeulue subspecies, with a small patch and a dark underside in the male only, links them, and van Eecke named it to signify the fact (*serunicus*; 'together at last').

No material seen.

Drupadia ravindra caesarea Weymer **comb. rev.**

(Text-fig. 1; Pl. 1, figs 16, 28)

[*Sithon ravindra* (Horsfield); Kheil, 1884 : 33, no. 9.]
Drupadia caesarea Weymer, 1887 : 9, pl. 2, fig. 4. Type-material, INDONESIA: Nias Is. (not located).
Sithon ravindra (Horsfield), var.; Staudinger, 1888 : 277.
Sithon moorei niasicola Staudinger, 1889 : 109, 164 [correction for *niasica* (p. 109), nom. praeocc.]. Type-material, INDONESIA: Nias Is. (not located).
Marmessus comla Swinhoe, 1912 : 194. Syntype ♂, ♀, INDONESIA: 'Sumatra' (BMNH) [examined].
Marmessus lisias caesarea (Weymer); van Eecke, 1914 : 255.
Marmessus caesarea (Weymer) = *niasica, niasicola* (Staudinger); Seitz, 1926 : 989, pl. 159, figs d2, d3; and d6 as '*niasica*'.
Marmessus lisias caesarea (Weymer) = '*corula*' [*comla*] Swinhoe; Riley, 1944 : 265.

After his three years' stay on Nias, Kheil reported this species as rare. Weymer's good description and illustration were overlooked by Staudinger, who described Nias specimens as *niasica* (p. 109) but, realising in time that this name was preoccupied, altered it to *niasicola* in his corrigenda (p. 164) which were published in the same issue of the *Iris*. Thus *niasica* Staudinger was an incorrect original spelling and should not have been used, but it confused Seitz, whose excellent figure of the male *caesarea* is labelled *niasica*. *Sithon niasica* Röber, 1886 is an entirely different species, discussed below after *D. theda*.

This is an extraordinarily differentiated subspecies. Both the male, with its silvery blue hind wing and fore wing base (fig. 16), and the female, are quite distinct. The latter, with the normal dark brown upperside strongly suffused with greyish white on both wings, is like a large version of the male *D. rufotaenia*

caesia shown at Pl. 3, fig. 61 (which, with two females, was found in the BMNH series of *caesarea* females).

Weymer's type-material has not been located, nor has that of Staudinger.

MATERIAL EXAMINED.

Marmessus comla Swinhoe. 1 ♂, 1 ♀, syntypes, INDONESIA: 'Sumatra' (*Sachs*) [both chemically discoloured].

INDONESIA: Nias Island, 33 ♂, 33 ♀; 'Sumatra' (*Sachs*), 2 ♀.

Drupadia ravindra batuna (Riley) **comb. n.**

(Text-fig. 1; Pl. 1, figs 20, 32)

Marmessus lisias batuna Riley, 1944 : 266. Holotype ♂, INDONESIA: Batu Is., Pulau Telo (BMNH) [examined].

Telo is one of the smaller islands, in the north-west of the Batu group.

The syntype figured on Pl. 1 has the fore wing upperside orange patch larger and less dusky than typical, and the underside, usually as in *connexa* (fig. 36), has the grey suffusion considerably reduced.

MATERIAL EXAMINED.

Marmessus lisias batuna, holotype ♂, INDONESIA: Batu Is., Pulau Telo, viii. 1896 (*I. Z. Kannegieter*).

Paratypes. INDONESIA: Pulau Telo, allotype ♀, 1 ♀, viii. 1896 (*I. Z. Kannegieter*); Batu Is., 1 ♂, ix. 1896 (*I. Z. Kannegieter*).

Drupadia ravindra connexa (Riley) **comb. n.**

(Text-fig. 1; Pl. 1, figs 24, 36)

Marmessus lisias connexa Riley, 1944 : 265, pl. 1, figs 14, 15. Holotype ♂, INDONESIA: Siberut (BMNH) [examined].

In addition to the differences given in the key, the hind wing underside appears to be constantly more heavily marked in black than is the case in *batuna*, to which it is very close.

MATERIAL EXAMINED.

Marmessus lisias connexa Riley, holotype ♂, INDONESIA: Siberut, ix. 1924 (*C.B.K. & N.S.*) [Kloss & Smedley].

Paratypes. INDONESIA: ♀ allotype, 3 ♂, 1 ♀, Siberut, ix. 1924 (*C.B.K. & N.S.*) [Kloss & Smedley]; 3 ♀, Sipora, x. 1924 (*C.B.K. & N.S.*); 1 ♂, Sipora, xi. 1924 (*H. H. Karny*).

Drupadia ravindra sumptuosa (Toxopeus) **comb. n.**

(Text-fig. 1; Pl. 1, figs 21, 33)

Myrina ravindra (Horsfield); Boisduval, 1836 : pl. 22, fig. 1, expl. p. 6.
Marmessus ravindra sumptuosa Toxopeus, 1931 : 421, 424. Holotype ♂, Indonesia: Bengkulu (Rijksmuseum van Natuurlijke Historie, Leiden).
Marmessus sumptuosa Toxopeus; Sclater, 1935 : 311.

Toxopeus's paper, in title and text, dealt with Java, and the *Zoological Record* (ed. Sclater) for 1934 wrongly assumed that was the locality. Moreover, it only cited page 421 of the paper, where this subspecies is simply mentioned casually as 'luxurious' and 'large'. The full description and locality follow, after a long digression, on pages 424–425.

The upperside appearance of the male is unmistakeable; deep shining blue with simple black borders to the fore wing. The fore wing underside is chocolate-brown. The female fore wing underside is pure deep orange, with the bands strongly outlined in black. Its upperside is brown as usual, with traces of orange in the disc.

A male specimen ex coll. Oberthür now in the BMNH is of unusual interest. Set upside down, its upperside has been hidden by the labels which read '*Ravindra* Horsf., Java/ex Musaeo Dris. Boisduval/*Myrina ravindra* Boisd./*Species G'al.* pl. 22, fig. 1'. Boisduval's figure was cited as 'Java, Horsfield', but this specimen, apparently the one whose underside is figured, is certainly not Javanese; it is a typical *sumptuosa*. While Horsfield was serving the Dutch (1801–1810) and the British (1811–1819) in Java he made several visits to Sumatra (D.N.B.), and in 1818 he accompanied Raffles on an inland expedition from Bencoolen [Bengkulu], doing much collecting (Stanley, 1971 : 87). This specimen, which bears evidence of age, must have been collected then, mixed with Javanese material, treated as a duplicate and set upside-down by Horsfield, and then passed by him to his correspondent, Boisduval (perhaps when the latter visited London in 1835).

Material examined.

Marmessus ravindra sumptuosa 'parallotype', Indonesia: Moeara Malisom, 50 m. Bengkulu, ♀, vi. 1931 (*van der Pijl*) (Rijksmuseum van Natuurlijke Historie, Leiden).

Indonesia: Lebong Tandai [90 km N.N.W. of Bengkulu], 19 ♂, 22 ♀, 1921–1923 (*C. J. Brooks*); 'Barisan Range, western slope', 2500 ft, 1 ♀ (*C. F. & J. Pratt*); 'Java' [Bengkulu] [1818] (*Horsfield*, ex coll. Boisduval), 1 ♂.

Drupadia ravindra janus (Riley) **comb. n.**

(Text-fig. 1; Pl. 1, figs 25, 37)

Marmessus lisias janus Riley, 1944 : 266. Holotype ♂, Indonesia: S.W. Sumatra (BMNH) [examined].

Located midway between the territories of *rav. sumptuosa* and *rav. ravindra*, this subspecies is interesting in that the male fore wing upperside not only has

the base blue, but also half the specimens have a dusky orange discal patch. The female fore wing underside is still bright orange, so the transition from here to west Java, where it is chocolate-brown like the male, is sudden.

All but one of Doherty's long series bear Oberthür's printed labels 'Marang (or Liwa), S.O. Sumatra, 1890', but one male has both a ms. label 'Marang' and also a printed one (not Oberthür's) reading 'Enggano, Sep. 1890, Doherty'. It is slightly smaller and darker, and has no trace of orange. Doherty collected in Enggano immediately after leaving Marang, but he did not include this species in his Enggano list (Doherty, 1891). However, it may be that another subspecies awaits rediscovery there. There are two dwarf males in the main series, one with and one without the orange patch.

Oberthür was French, and his 'S.O.' means *sud-ouest* (S.W.), not the German *sud-öst* (S.E.) which Fruhstorfer would mean by it. Marang and Liwa are respectively coastal and inland, both close to Krui.

MATERIAL EXAMINED.

Marmessus lisias janus Riley, holotype ♂, INDONESIA: S.W. Sumatra, Marang, 1890 (*W. Doherty*).

Paratypes. Allotype ♀, 38 ♂, 18 ♀, INDONESIA: S.W. Sumatra, Marang, 1890 (*W. Doherty*); 2 ♀, Liwa, 1890 (*W. Doherty*).

INDONESIA: S.W. Sumatra, 1 ♂, Krui, iv–vii. 1897 (*collector F*, ex coll. Van der Poll).

Drupadia ravindra ravindra (Horsfield) comb. rev.

(Text-fig. 1; Pl. 1, figs 26, 38)

Thecla ravindra Horsfield, 1828 : pl. 1, figs 11, 11a, explic. p.1. Holotype ♂, INDONESIA: Java (BMNH) [examined].
Myrina ravindra (Horsfield); Horsfield, 1829 : 117, no. 47.
Drupadia ravindra (Horsfield); Moore, 1884 : 31.
Marmessus ravindra ravindra (Horsfield); Fruhstorfer, 1912 : 250.
Marmessus ravindra medullia Fruhstorfer, 1912 : 250. LECTOTYPE ♂, here designated, INDONESIA: S.E. Java (BMNH) [examined]. [Synonymised by Kalis, 1933 : 86.]
Drupada ravindra (Horsfield); Piepers, 1921 : 105, pl. 27, figs 168a, b, c. [genus misspelt].
Marmessus ravindra (Horsfield); Seitz, 1926 : 990, pl. 159, fig. g1 (as *'jalindra'* on plate).
Marmessus medullia Fruhstorfer; Seitz, 1926 : 990, pl. 159, figs g4, g5.
Biduanda thesmia javanica Toxopeus, 1932 : LXX. 1 ♂, 1 ♀ syntypes, INDONESIA: Java (not located). [Aberration.] **Syn. n.**
Marmessus ravindra ravindra (Horsfield) var. *transiens* Kalis, 1933 : 86.

The male is typically large, with the fore wing upperside plain black and the hind wing unmarked except for the black costal border above vein 6. The female upperside is plain dark brown. The fore wing underside is chocolate-grey, very slightly browner in the female. The commoner form is smaller, with the male hind wing upperside more or less suffused black at the base, the apex, and along the dorsum, with a streak at the cell end.

Horsfield's main home during his stay in Java was central, at Surakarta, whence

he collected extensively for over fifteen years throughout the island. His 1829 text covers specimens of both forms, with expanse '11–17 lines' [=23·5–36 mm, or fore wing length about 13–20 mm], but for his illustration and holotype he selected the largest male. His 1828 plate was reproduced by Stanley (1971 : 86).

Fruhstorfer found the smaller, darker form commonly in east Java, and concluded it was a distinct subspecies which he named *medullia*. His description of the female hind wing upperside as 'monoton grau' was clearly a lapsus, for it is uniform dark brown. He appears to have made three visits to Java, an extensive one in 1891–1893 and short ones in 1890 and from late 1896 to early 1897. His label data are perfunctory; simply 'West Java', 'East Java', or 'Java merid. [South]', with the year only. One exception reads 'Java merid., Pelaboean, 1892'. *Labuan* or *laboean*, with or without the affix '*Pe-*' means an anchorage or harbour, a frequent place name but in Java applied to Pelaboean Ratoe, or Wijnkoops Bay, in the south-west. All his other 'Java merid.' labels are assumed to refer to the south-east, where Fruhstorfer did much collecting. He summarised his localities in a brief outline of his main tour, but gave no dates (Fruhstorfer, 1897 : 308–309).

In the BMNH type collection are two specimens labelled '*medullia* Fruhst. Type'; a male with 'Java merid., 1896' and a female with merely 'Java orient.'. I now designate the male as lectotype of *Marmessus ravindra medullia* Fruhstorfer, with locality the coastal hills south of the Tengger Mountains, S.E. Java.

Several Fruhstorfer specimens appear to have had yellow BMNH paratype labels added but, excepting one, without identities. All are presumably from his *medullia* series. They are:

1 ♂; Java merid., Pelabuan, 1892 [but S.W. Java was not the type locality].
1 ♀; Java merid., 1500 ft, 1896 (S.E. Java].
1 ♂; Java orient., Montes Tengger, 2000 ft, 1890/*medullia* Fruhst.
1 ♂; Java orient.

The first being large and *ravindra*-like.

Another male, labelled; 1590 ♂, Lawang [E.] Java (*Holtz*); and Swinhoe coll. 1916 [printed in red]; Joicey Bequest; bears a green BMNH Allotype label with no further data. This can be linked with no published name at all.

Kalis, with good material, found that the species varied in Java between the large, typical *ravindra*-like form from August to March, and the small *medullia*-like form from April to June. He consequently argued that the name *medullia* was untenable in a subspecific sense. Thus *D. r. ravindra* may be considered to comprise the forms *ravindra* Horsfield, *medullia* Fruhstorfer, and the intermediate *transiens* Kalis.

The specimens described by Toxopeus were a male and a female from Radjamandala [W. Java, 30 km north-west of Bandoeng], very like *D. r. ravindra* but possessing fore wing vein 9. Although noting that they were unlike any known '*Biduanda*' [species with vein 9], and suggesting that they might be monstrosities, he deliberately named them as a subspecies of *B. thesmia* [*D. theda*]. I have not seen these specimens, but from the description it seems clear that they are minor aberrations of *D. r. ravindra*. From an examination made in 1954

of nearly 600 specimens of *D. ravindra* from various localities between Burma and Palawan, it was found that about six per cent of each sex had vein 9 present in the fore wings, a further two per cent having it in one wing only, although in most cases it is very short.

Piepers figured the larva and pupa, but erroneously (I am sure) stated that the pupa was secured by a median thread. His text was copied by Seitz. Piepers said he did not look for ant-association because such symbiosis was unknown until after he had left Java. One assumes that he did not rear the insect *ab ovo*.

MATERIAL EXAMINED.

Thecla ravindra Horsfield, holotype ♂, INDONESIA: Java [1801–1818] (*Horsfield*). *Marmessus ravindra medullia* Fruhstorfer, lectotype ♂, INDONESIA: S.[-E.] Java, 1896 (*Fruhstorfer*).

INDONESIA: 9 ♂, 7 ♀, Java; 16 ♂, 21 ♀, West Java; 6 ♂, 16 ♀, S.W. Java; 13 ♂, 9 ♀, East Java; 1 ♂, 6 ♀, S.[-E.] Java.

[1 ♂, Lombok, requires confirmation. 1 ♂, 1 ♀, 'Bandjamassin, S.E. Borneo', ?err. loc.]

Drupadia ravindra balina (Fruhstorfer) comb. n.

Marmessus ravindra balina Fruhstorfer, 1914 : 175. LECTOTYPE ♂, here designated, INDONESIA: Bali (BMNH) [examined].
Marmessus balina Fruhstorfer; Seitz, 1926 : 990, pl. 159, fig. g2.

The illustration by Seitz shows an unusually blue male. The hind wing upperside is normally black bordered along the entire termen and, if any blue extends to the cell, the cell-end veins are heavily blackened. The underside is darker than that of *D. r. medullia*.

Fruhstorfer's male and female syntypes, and a second female, have the same data, and I now designate the male as lectotype of *Marmessus ravindra balina* Fruhstorfer.

The BMNH series is remarkably constant (except for size), no doubt because most were taken at the same time.

MATERIAL EXAMINED.

Marmessus ravindra balina Fruhstorfer, lectotype ♂, INDONESIA: Bali, ix. 1906 (*Fruhstorfer*).

Paralectotypes. Syntype ♀, 1 ♀, INDONESIA: Bali, ix. 1906 (*Fruhstorfer*). INDONESIA: Bali, 5 ♂, 7 ♀, iii–iv. 1806 (*W. Doherty*).

Drupadia ravindra banka (Riley) comb. n.

[*Sithon lisias boisduvalii* (Moore); Snellen, 1890 : 299. Belitung.]
Marmessus lisias banka Riley, 1944 : 267. Holotype ♂, INDONESIA: Bangka Island (BMNH) [examined].

This is a most richly coloured subspecies. The male hind wing upperside is clear deep blue, shot with dark violet when viewed from any angle except in front. The orange patch is bright and prominent in both sexes. The hind wing underside is more heavily marked than usual, and the subtornal reddish bars, which are normally a character of *D. rufotaenia*, are often well developed. In contrast, the fore wing underside markings are not prominent.

The fine series collected by Dr Hagen (ex coll. Rothschild) ranges in fore wing length from 18 mm down to 12 mm (a very heavily marked male), and 11 mm (two females, one perhaps a *D. rufotaenia*).

The otherwise distinct possibility that the two syntypes of *Papilio lisias* Fabricius (see *D. rav. corbeti* above) might have been collected during the laborious tacking of the *Resolution* and the *Discovery* through the tortuous Bangka Strait can now be ruled out by their faint brown markings on the hind wing underside.

Snellen's record of specimens from the neighbouring island of Belitung, having smaller orange patches on the fore wing than *D. rav. boisduvalii* and with the hind wing underside markings darker, suggest that this subspecies occurs there also.

Material examined.

Marmessus lisias banka Riley, holotype ♂, Indonesia: Bangka Is, Soengei Liat (*Van der Poll*).

Paratypes. Allotype ♀, 1 ♂, 1 ♀, Indonesia: Bangka Is, Soengei Liat (*Van der Poll*).

Indonesia: Bangka Is, 15 ♂, 17 ♀, 1891 (*Hagen*).

Drupadia ravindra lisiades (Fruhstorfer) **comb. n.**

Sithon ravindra (Horsfield) var.; Staudinger, 1888 : 277, pl. 95. Sarawak.
Marmessus lisias lisiades Fruhstorfer, 1912 : 248. 2 ♂ syntypes, East Malaysia: Sabah, Mt Kina Balu (not located).
Marmessus lisiades Fruhstorfer; Seitz, 1926 : 989, pl. 159, fig. d1.

Fruhstorfer's description was of two males which have not been traced. This subspecies has the same underside, with a bright orange fore wing, as both *D. r. moorei* (Pl. 1, fig. 34) and *D. r. fulminans* (Pl. 1, fig. 31), but compared with their uppersides (Pl. 1, figs 22, 19) it is intermediate, having a small but well marked orange fore wing patch. It differs from both in the peculiar chalky blue of the hind wing upperside (a feature not well shown in the cited illustrations).

Moulton (1911 : 165) mentioned the uppersides of the long Sarawak Museum series which nicely linked *D. r. moorei* with its plain black fore wing and *D. r. fulminans* ('*atra*') with its large orange patch, but he did not refer to the hind wing colour. His intermediates probably included the then unnamed *D. r. lisiades*.

D. r. moorei appears to inhabit west Kalimantan, Sarawak and north Sabah, *D. r. fulminans* occurring from east Sabah through east Kalimantan round the south and west coasts. *D. r. lisiades* has been found mainly in the west and north; it may be an inland race, but its status requires investigation.

MATERIAL EXAMINED.

MALAYSIA: 2 ♂, Sabah; 8 ♂, 11 ♀, Sarawak. INDONESIA: West Kalimantan, 1 ♂, 4 ♀, Pontianak (Ledru & Mulot, 1897); 2 ♂, 1 ♀, Lohaban[g] (0°48'N., 109°02'E., the westernmost point of Kalimantan).

Drupadia ravindra fulminans (Staudinger) **comb. n.**

(Pl. 1, figs 19, 31)

Sithon moorei fulminans Staudinger, 1889 : 109. Type-material, INDONESIA: South Kalimantan (not located).
Marmessus boisduvalii (Moore) var. *atra* Druce, 1896 : 679. Type-material, EAST MALAYSIA: East Sabah (not located). **Syn. n.**
Marmessus fulminans (Staudinger); Seitz, 1926 : 989, pl. 146, figs g2, g3, pl. 159, fig. d4.
Marmessus atra Druce; Seitz, 1926 : 989.

No primary type-material of these two nominal taxa has been found, but the male figured on Pl. 1 (Sapagaya, a river running north into Sandakan bay, 15.ix.1894 [*Cator*]) must have been a paratype of *D. r. atra*. Seitz deduces that Druce's name *atra* was for a dark form of *D. r. fulminans* but this was not so. Druce did not know Staudinger's insect, and his seemingly incongruous name simply denoted the black markings on the hind wing underside as compared with those of what he called *Marmessus boisduvalii*, which are orange-brown.

This is another very vivid subspecies in the male. The orange area on the fore wing upperside is extensive and intense, and the hind wing is very deep violet. The females of this and of *D. r. lisiades* are very similar, dark brown with an orange patch which is smaller in the latter.

The territories in Borneo/Kalimantan of three subspecies, including this one, have been discussed under *D. r. lisiades* above. They seem to radiate to the west and south. Under the next subspecies, *D. r. surindra*, two further forms which radiate eastwards will have to be dealt with.

MATERIAL EXAMINED.

EAST MALAYSIA: 2 ♂, 1 ♀, Sabah, Sandakan. INDONESIA: 11 ♂, 2 ♀, S.E. Kalimantan; 4 ♂, 1 ♀, Pulo Laut, S. Kalimantan; 2 ♂, 1 ♀, West Kalimantan, Sintang.

Drupadia ravindra surindra (Druce)

(Pl. 1, figs 23, 35)

Marmessus surindra Druce, 1895 : 617, pl. 34, fig. 7. Holotype ♂, EAST MALAYSIA: Sabah (BMNH) [examined].
Marmessus surindra Druce; Seitz, 1926 : 990, pl. 156, figs g7, h1.
Drupadia (*Marmessus*) *ravindra surindra* (Druce); Barlow, Banks & Holloway, 1971 : 293.

The uppersides of all the remaining subspecies are without an orange patch, and the male hind wing blue or violet-blue not only extends to the costa but is

uniform in colour and has no contrasting reflection, while the two tornal black spots are absent. Consequently the male upperside shows two cleanly contrasted colours. In the slightly aberrant specimen selected for Pl. 1, the bright blue of the typical hind wing reappears in a series of submarginal streaks at the fore wing tornus. Several Sabah specimens are so marked; a departure from the normal variation trends. The female of this subspecies is particularly distinctive in having the tornal third of the hind wing upperside almost pure white. In all the remaining eastern subspecies the tornus has only a narrow blue line round the two tornal black spots.

Druce's original series was from 'Kina Balu (*Waterstradt*), Sandakan (*Pryer*), S.E. Borneo (*Wahnes*)'. His holotype from Sandakan is rather small but otherwise similar to Kina Balu specimens; others from Sandakan and particularly two Wahnes males from S.E. Kalimantan are smaller still and have very dusky hind wings. Their upperside approaches that of *D. r. joloana*, but they do not have the latter's very pale underside. They seem intermediates; perhaps expatriate dwarfs.

MATERIAL EXAMINED.

Marmessus surindra Druce, holotype ♂. EAST MALAYSIA: Sabah, Sandakan [*Pryer*].

MALAYSIA: Sabah; 2 ♂, Melaman, 1000 ft (*Woollett*); 4 ♂, 4 ♀, Kina Balu; 30 ♂, 30 ♀, Kina Balu, v–viii. 1903 (*Waterstradt*, late visit); 4 ♂, 4 ♀, Sandakan; 3 ♂, 4 ♀, various.

Drupadia ravindra joloana (Staudinger) **comb. n.**

(Pl. 1, figs 27, 39)

Sithon joloana Staudinger, 1889 : 109. Type-material, PHILIPPINES: Jolo Is. (not located).
Marmessus surindra var. *albula* Druce, 1895 : 617. LECTOTYPE ♀, here designated, EAST MALAYSIA: Sabah (BMNH) [examined]. **Syn. n.**
Marmessus ravindra joloana (Staudinger); Fruhstorfer, 1912 : 250.
Marmessus joloana (Staudinger); Seitz, 1926 : 990, pl. 159, fig. g3.
Marmessus albula Druce; Seitz, 1926 : 990.

Druce described both sexes from Sandakan, but he apparently did not read Staudinger's description of *Sithon joloana*, with which they agree. He noted the differences from the male *D. r. ravindrina*, of which he had Staudinger's 'type' before him. Seitz in his turn misinterpreted Druce, saying that in var. *albula* the fore wing ground colour is plain white below. The termen is narrowly shaded ochreous, as shown in his good illustration of *D. r. joloana*.

In the BMNH type collection is only a female from coll. Druce, labelled '*surindra* var. *albula* H. H. Druce', and with a modern green 'allotype' label. There is no indication when the latter was added; presumably another syntype then existed and was a male, but is now lost. I therefore now designate this female as lectotype of *Marmessus surindra* var. *albula* Druce. Its data label reads 'Sandakan (*Pryer*)'.

Although Druce said it appeared to be common at Sandakan, there is only one other specimen in the BMNH from the Borneo mainland. *D. r. joloana* seems to be endemic in the Sulu Islands and epidemic on nearby coasts.

MATERIAL EXAMINED.

Marmessus surindra var. *albula* Druce, ♀ lectotype. EAST MALAYSIA: Sabah; Sandakan (*Pryer*).

PHILIPPINES: 2 ♂, 3 ♀, Jolo (*Fruhstorfer*); 1 ♀, Sibutu, vii. 1893 (*Everett*); 1 ♀, Palawan (*Platen*). EAST MALAYSIA: Sabah; 1 ♀, Sandakan; 1 ♂, 1 ♀, Banguey [Banggi], x. 1894 [*Cator*].

Note. The Banggi pair has the underside darker, approaching *D. r. surindra*, and may represent an intermediate subspecies.

Drupadia ravindra ravindrina (Staudinger) comb. rev.

Sithon ravindra var. *ravindrina* Staudinger, 1889 : 108. Holotype ♂, PHILIPPINES: Palawan (BMNH) [examined).
Drupadia ravindrina (Staudinger); Semper, 1892 : 354.
Marmessus ravindrina (Staudinger); Fruhstorfer, 1912 : 250.
Marmessus ravindrina (Staudinger); Seitz, 1926 : 990, pl. 159, figs g6, g7.

The only differences between this and the next subspecies on the upperside are in the hind wing, which is slightly deeper violet-blue in the male, while in the female the tornal lunules are clear bright blue; indeed in some specimens they are double, two blue arcs separated by a black line. On the underside the fore wings are not quite so pale and the hind wing black markings, smaller than in all preceding subspecies, are not so small as in *D. r. resoluta*.

MATERIAL EXAMINED.

Sithon ravindra var. *ravindrina* Staudinger, holotype ♂, PHILIPPINES: Palaw[an] (*Pl*[*aten*]).

PHILIPPINES: 11 ♂, 17 ♀, Palawan Is. (*Doherty, Everett, Cator, Wileman, et al.*); 5 ♂, 9 ♀, Balabac Is. (*Everett, Cator*).

Drupadia ravindra resoluta subsp. n.

(Pl. 2, figs 49, 52)

As usual, the head, eyes, antennae and upperside of the body are very dark brown except for the apical half of the antennal club which is orange-brown, and the following which are white: each joint of the antennae, the basal half of each palp, a narrow ring round each eye, and the frons. The underside of the body is white and the legs are white with a black ring at each joint.

Wings; upperside. The male fore wing is plain black, and the hind wing is rich shining violet-blue except for the greyish white brand, and the dorsum below vein 1 and the costa above vein 7 which are brown. The female is very dark brown. On the hind wing of both sexes the usual black marginal hairline, inwardly edged white, and the white terminal cilia, are conspicuous. The tails are black centred and edged with white, and the two black sub-

tornal spots are obsolete in the male but distinct and crowned with diffuse blue-grey lunules in the female.

Underside. The fore wing is dull creamy orange, paler in the female, and marked as usual; a blackish, white-edged streak along the basal fifth of the cell, a similar dark brown one across the centre of the cell with a small black spot below it, a narrow orange cell-end bar, and a very narrow postdiscal band which fades apically into the ground colour, as does the submarginal line above vein 2. The hind wing is white with the usual black markings greatly reduced; an oblique sub-basal stripe from the base of the dorsum to the origin of vein 8, a more or less parallel series of five spots, the first three contiguous, the fourth mid-cell, the fifth across space 7 above the origin of vein 7; a third row of four spots consisting of a horizontal bar from vein 1a to mid vein 1, a bar below the origin of vein 2, the cell-end bar, and a bar across the centres of spaces 6, 7; the outer pair of these are actually the ends of the postdiscal series whose other five spots curve between them; a U-shaped line in space 1, and short bars across the centres of spaces 2, 3, and 4–5. Due to the reduced size of these markings there is an abnormally wide space before the submarginal and marginal black lines which, as usual, run very close and parallel between the end of vein 1a and vein 1 and which in that space are edged with reddish orange. The usual black eye-spot in space 2 and tornal lobe are surrounded by sparse metallic blue scales.

The differences between this and the nearest other subspecies are noted under *D. r. ravindrina* above.

Staudinger (1889 : 108) knew of one specimen from Luzon, but Semper (1890 : 354) said he had never found the species east of Palawan. This subspecies must be very rare. The Luzon specimen in the BMNH is identical to Mindoro specimens.

Material examined.

Holotype. [Philippines:] Mindoro, ♂, xii. 1894 (*Everett*).

Paratypes. [Philippines:] Mindoro, 2 ♂, 3 ♀, xii. 1894 (*Everett*); [Luzon], near Manila, 1 ♂, i. 1895 (*Everett*); Mindoro, 2 ♂ (no further data).

Drupadia rufotaenia (Fruhstorfer) **comb. n.**

(Text-figs 12–15; Pl. 2, figs 43, 47; Pl. 3, figs 61–68; Pl. 5, fig. 101)

Marmessus rufotaenia Fruhstorfer, 1912 : 249.

The characteristics of this little species, and its similarity in nearly every subspecies to dwarf females of *D. ravindra*, have been noted already (pp. 291, 293, 297, 302). Except in Burma it is extremely rare, and it is tempting to regard it as a morph of that species, but two features preclude this on present knowledge; its greatly different male genitalia, and the fact that in Burma, whence there is a long series, the differences are quite constant.

The name, 'red ribbon' (*taenia rufa*), refers to the prominent extension of the brick-red outer edging to the subtornal black line which encloses the metallic blue scaling round the hind wing underside eye-spots. This character is a useful but not infallible guide; it is less distinct in females (where it is most needed) and, often faintly discernible in *D. ravindra*, it is sometimes quite well developed in heavily marked specimens of that species. It is not necessarily always red, tending to follow the variation in fore wing ground colour, and if the occurrence of

D. rufotaenia in Java is confirmed, the ribbon may well prove there to be chocolate.

The only certain diagnostic of *D. rufotaenia* on present knowledge is the aspect of the male genitalia, whose large size necessitates, and betrays its presence by, the correspondingly long abdomen.

The underside markings are exactly as in *D. ravindra* and, having just been described under *D. rav. resoluta*, will not be detailed again. Subspecies differ in the colour of the fore wing underside and, on the upperside, in the presence or absence of the fore wing orange patch and in the nature of the tornal pale area on the hind wing.

The range as hitherto recorded was from Burma to the Malaysian peninsula, Sumatra and Java. Java was included on the basis of two males which on dissection have proved to be *D. ravindra* dwarfs, both so identifiable at sight as each has some residual shining blue scaling on the hind wing upperside. But there is in the BMNH one Java female which may well prove to be this species, if it can be confirmed by discovery of a male. It will, as might be expected, then require a new name, as the fore wing underside is dark chocolate.

The range of *D. rufotaenia* can, however, now be more than doubled. Definite male specimens have been identified from Nias, north and south Borneo, Palawan, and Mindoro. I have the personal impression that it favours open lowland forest rather than deep jungle, and it should be sought wherever *D. ravindra* occurs.

Key to Subspecies of *D. rufotaenia*

(Pl. 2, figs 43, 47; Pl. 3, figs 61–68)

1 Fore wing underside pale to intense orange 2
– Fore wing underside either heavily suffused with grey, or other than orange, at least in the male 6
2 Upperside dark brown with an extensive orange discal area on the fore wing
ruf. archbaldi (Evans) (p. 316)
– Fore wing upperside unmarked 3
3 Fore wing underside deep orange (peninsular Malaysia) (figs 43, 47)
ruf. rufotaenia (Fruhstorfer) (p. 316)
– Fore wing underside pale dull orange 4
4 Hind wing upperside with the tornal quarter very pale greyish white (Sabah) (figs 62, 66) . . . . . ***ruf. kina*** subsp. n. (p. 318)
– Hind wing upperside without a wide pale area 5
5 Hind wing underside with the chequered spots normal. Male hind wing upperside with a submarginal series of blue spots (Palawan) (figs 63, 67) . ***ruf. torquata*** (p. 318)
– Hind wing underside with the chequered markings much reduced. Upperside plain (Mindoro) (figs 64, 68) . . . . . ***ruf. praecox*** subsp. n. (p. 319)
6 Fore wing underside orange, heavily suffused with grey in the male. Fore wing upperside with an orange patch and with its basal third, and the tornal half of the hind wing, very pale grey (Nias) (figs 61, 65) . ***ruf. caesia*** subsp. n. (p. 317)
– Male fore wing underside deep greyish brown in the apical half (female unknown, but probably orange). Fore wing upperside plain; hind wing with the tornal quarter suffused with pale dull (not shining) greyish blue (S.W. Sumatra)
ruf. alcyma (Riley) (p. 317)

Drupadia rufotaenia archbaldi (Evans) **comb. n.**

Marmessus archbaldi Evans, 1932 : vi, 290, no. H73.2. Holotype ♂, Burma: Dawna Hills (BMNH) [examined].
Marmessus rufotaenia archbaldi Evans; Corbet, 1948 : 102.

Discovered independently by Evans, who named it after its first captor, Mr W. Archbald of Burma, this subspecies was not identified with *rufotaenia* for sixteen years.

This subspecies ranges through Burma and Thailand, from about 21°N. to the Kra Isthmus. Like *D. rav. boisduvalii* females, the upperside is dark brown with a few grey scales at the hind wing tornus, and with an extensive orange area on the fore wing. This area is largest in the north, where discal spots of orange may appear on the hind wing as well, and it gradually decreases until in north Malaysia only a vestige remains.

Material examined.

Marmessus archbaldi Evans, holotype ♂, Burma: Dawnas [16°30'N., 98°30'E.], i. 1921 (*W. H. Evans*).

Burma: 14 ♂, 11 ♀, Shwenyaung [20°48'N., 96°58'E.] southwards to Mergui. Thailand: 1 ♀, Phrae Dist., Me Tharn, iv. 1918; 1 ♀, Nong Khai Ploy, 20.iv.1914 (both *E. J. Godfrey*); 3 ♂, 1 ♀, Ranawng (*Doherty*).

Drupadia rufotaenia rufotaenia (Fruhstorfer) **comb. n.**

(Pl. 2, figs 43, 47)

[*Drupadia moorei* var.; Distant, 1886 : 460, pl. 44, fig. 11.]
Marmessus rufotaenia Fruhstorfer, 1912 : 249. Holotype ♂, West Malaysia: Malacca (not located).
Marmessus rufotaenia Fruhstorfer; Seitz, 1926 : 990.
Marmessus rufotaenia rufotaenia Fruhstorfer; Corbet, 1948 : 102.
Marmessus rufotaenia rufotaenia Fruhstorfer; Eliot, 1959 : 382.

The figures on Pl. 2 are given alongside a similar-sized dwarf *D. rav. moorei* from Singapore for comparison.

Distant's excellent figure was published with the notes that the specimen was a female from Malacca in coll. Staudinger. It has not been located. To him it would naturally appear to be a female but now, knowing that the sexes are similar, it seems probable that it was a male, with the long slim abdomen, slightly dilated before the acutely tapered apex, well shown in the illustration.

Fruhstorfer named the species from Distant's figure and said that he knew of no other specimen, so Staudinger's lost specimen is the holotype. He suggested it was related to what he called *Marmessus niasica* Röber, but Röber's very clear photograph shows that his *Sithon niasica* was marked like *D. theda* on the hind wing underside and it should have been grouped by Fruhstorfer among the *Biduanda* species. The type-locality has in the past wrongly been given as Singapore.

The upperside is plain very dark brown. Normal specimens are found throughout the Malay peninsula, in Singapore, north-east Sumatra and northern Borneo. The transition to the Burmese subspecies *archbaldi* Evans commences in the Langkawi Islands, where the fore wing has a small orange flash (Eliot, 1959).

MATERIAL EXAMINED.

WEST MALAYSIA: 1 ♀, Penang (*Adams*); 1 ♀ [Pahang], Mt Tahan (*J. Waterstradt*); 1 ♀, Pahang, Telom R., ii. 1932 (*Capt. Holloway*); 1 ♂, Trengganu, Tebu F.R., 4.v.1958 (*J. A. Hislop*) (coll. Hislop); 1 ♂, Pulo Tioman, 14.v.1959 (*G. C. Stubbs*) (coll. Stubbs); 2 ♀, Johore, Endau, 17.ix.1957, 26.x.1958 (*G. C. Stubbs*) (coll. Stubbs); 1 ♂ [Negeri Sembilan], Seremban, 6.ix.1958 (*H. L. Lewis*). SINGAPORE: 1 ♂, MacRitchie Reservoir, 17.xii.1936 (*C. F. Cowan*); 1 ♀, Nee Soon, 27.vii.1952 (*id.*); 1 ♀ (?) (reared from larva), 6.i.1955 (*R. C. R. Morrell*). INDONESIA: N.E. Sumatra, 3 ♀ [Medan area] [c. 1893] (*Martin*). EAST MALAYSIA: E. Sarawak, 1 ♀, Limbang R., vii. 1891 (*A. H. Everett*); W. Sabah, 1 ♂, Lumbidan, iii. 1892 (*A. H. Everett*).

Notes. The five ♂♂ are positive identifications, the eleven ♀♀ only presumptive. Regarding the ♀ reared by Morrell, see the remarks on page 297 above.

Also examined: 4 ♂, 3 ♀, extreme dwarf *D. rav. moorei* (fore wing lengths 11–13 mm) in colls J. N. Eliot, G. C. Stubbs, and J. A. Hislop, from Langkawi Is. and peninsular Malaysia.

Lumbidan is one of four Everett localities 'on the coast of Borneo immediately opposite [the northern end of] Labuan' (Everett, 1889 : 93). The only map showing it which I have found is Frank Hatton's (Hatton, 1886).

Drupadia rufotaenia alcyma (Riley) comb. n.

Marmessus archbaldi alcyma Riley, 1944 : 267, pl. 1, fig. 3. Holotype ♂, INDONESIA: S.W. Sumatra (BMNH) [examined].
Marmessus rufotaenia alcyma Riley; Corbet, 1948 : 102.

Among about 60 specimens of *D. rav. janus* which William Doherty collected at Marang and Liwa, Riley detected two males of this species.

As usual, they closely resemble the female of the former on the upperside, and the male on the underside. The female fore wing underside will probably prove to be deep orange, as in the *D. rav. janus* female.

MATERIAL EXAMINED.

Marmessus archbaldi alcyma Riley, holotype ♂, paratype ♂, INDONESIA: S.W. Sumatra, Marang [viii–ix] 1890 (*W. Doherty*).

Drupadia rufotaenia caesia subsp. n.

(Pl. 3, figs 61, 65)

The upperside (fig. 61, male) of both sexes, and the underside of the female, are delightful miniatures of the very distinctive *D. rav. caesarea* female. The male underside (fig. 65),

with the distal half of the fore wing heavily clouded with grey, resembles the Nias male of the larger species. The fore wing length is 11 mm.

MATERIAL EXAMINED.

Holotype ♂, INDONESIA: Nias Is. [probably ix–x. 1897] (*Raap*).

Paratypes. INDONESIA: Nias Is., 1 ♀ (*Raap*); 1 ♀ (*Van der Poll*).

Notes. Regarding Hugo Raap's botanical visit to Nias, see Raap, 1903.

Before leaving the Sumatra area, it is noted that two female specimens in the BMNH from Banka Is, among several intermediate dwarf *D. rav. banka*, may represent a further subspecies there.

Drupadia rufotaenia kina subsp. n.

(Pl. 3, figs 62, 66)

The holotype and one apparently corresponding female only are known. The upperside of each is very dark brown with the tornal third of the hind wing very pale greyish white (exactly as in the female of *D. rav. surindra*). On the fore wing underside the male shades from white at the base to ochreous grey, and the female from white to pale ochreous at the termen (exactly as in the respective sexes of *D. rav. surindra*). The fore wing length in this rather large subspecies is 12–13 mm.

Like the western *D. rav. moorei* and the eastern *D. rav. surindra*, so *D. ruf. rufotaenia* and *D. ruf. kina*, appear to share a slight overlap in western Sabah. In each species the eastern subspecies seems, on the scanty data available, to frequent the foothills.

MATERIAL EXAMINED.

Holotype ♂, EAST MALAYSIA: Sabah, Kina Balu (*Waterstradt*).

Paratype, ♀, EAST MALAYSIA: Sabah, Kretam [coastal hill 65 km south-east of Sandakan], 14.vii.1950 (*J. D. H. Hedley*).

Drupadia rufotaenia torquata subsp. n.

(Pl. 3, figs 63, 67)

This is a distinctly large subspecies, and the male genitalia (of the holotype), although of typical pattern, are correspondingly larger in all parts. The fore wing length is 14 mm. The male upperside markings are unusual.

The upperside is very dark brown, as might be expected, with two small dull blue subtornal lunules on the hind wing. In the male these two spots are ovate instead of crescentic, and are repeated as a series in spaces 3 and 4 and, in the holotype, space 5.

The underside is exactly as in *D. rav. ravindrina* from Palawan, with the fore wing dull orange, paler in the female.

MATERIAL EXAMINED.

Holotype ♂, PHILIPPINES: Palawan [*D. Cator*].

Paratypes. PHILIPPINES: 1 ♂, 2 ♀, Palawan, viii–ix. 1894 [*Cator*]; 1 ♂, 1 ♀, Palawan; 1 ♀, Balabac, x. 1894 [*Cator*].

Drupadia rufotaenia praecox subsp. n.

(Pl. 3, figs 64, 68)

Alfred Hart Everett collected the unique male at the same time as his series of *D. rav. resoluta*. It is very small, perhaps a small individual representing a normally-sized population.

The upperside is plain dark brown, unmarked (fig. 64, which inevitably exaggerates every blemish). The fore wing underside is rather dull orange, and the markings on the hind wing underside, like those of *D. rav. resoluta*, are considerably reduced.

The fore wing length is 9·5 mm.

MATERIAL EXAMINED.

Holotype ♂, PHILIPPINES: Mindoro, xii. 1894 (*Everett*).

Drupadia cinderella sp. n.

(Text-fig. 6; Pl. 2, figs 54, 58; Pl. 5, fig. 102)

The male fore wing dorsum and hind wing costa are strongly lobed, and the fore wing dorsal margin bears an underlying row of long black hairs which are directed forward to cover an ovate nacreous area round the central half of vein 1. The hind wing upperside has a large brown sub-basal brand filling the bases of spaces 6 and 7, which slightly distorts the radial vein before the origin of vein 7. In all normal positions of the wings the long black hairs are quite hidden between the wing lobes, and are interposed between the nacreous area and the brand. The fore wing length is 16 mm in both sexes.

The male upperside is black, with the tornal half of the hind wing shining bright blue bordered by a black marginal hairline and white cilia. The female is similar but dark brown and greyish white. The tails are white, with a black centre line, and there are the usual two black subtornal spots.

The underside is deep ochreous with traces of darker cell-end and postdiscal lines which are outwardly edged white; the tornal half of the hind wing is white, this area reaching the apex and bearing prominent series of sagittate submarginal and lunulate marginal black spots which decrease in size from the tornus. The marginal lines and tails are as on the upperside.

Described from two of each sex taken recently by Captain J. Smeaton-Stuart, who has kindly presented them to the BMNH. Already in the collection were three specimens in very poor condition, one labelled '*klossii* Evans, new species', a name not published. These are all duller in colour, with the tornal areas darker, probably the result of age, but perhaps indicating a distinct subspecies in Sabah.

Luckily Captain Smeaton-Stuart remembered catching the specimens and it has been possible to label them. Halting for a rest while searching for a crashed aircraft, he saw them 'glittering like jewels against the dark green of the jungle' in a clearing on the mountain-side; 'they have an energetic flight, making frequent sorties from a favourite perch, and were fairly easy to catch' (*in litt.*).

MATERIAL EXAMINED.

Holotype ♂, EAST MALAYSIA: Sarawak, mountain due east of Serian, about 50 km S.E. of Kuching, 300 m, iv. 1966 (*Smeaton-Stuart*).

Paratypes. East Malaysia: 1 ♂, 2 ♀, Sarawak, mountain due east of Serian, about 50 km S.E. of Kuching, 300 m, iv. 1966 (*Smeaton-Stuart*).

Specimens excluded from the type-series. East Malaysia: Sabah, 2 ♂, 1 ♀, Bettotan, near Sandakan, vii–viii. 1927 (*C. B. K*[*loss*] & *H. M. P*[*endlebury*]).

Drupadia cindi sp. n.

(Pl. 2, figs 55, 56, 59; Pl. 5, fig. 103)

In most respects this is a miniature of *D. cinderella*, but the male upperside is quite different, and male insignia are entirely lacking.

The fore wing length is 10 mm (male), 11–12 mm (female). The male upperside is very dark brown with an extensive but obscure deep purple reflection over the discs of both wings (fig. 55, but the reflection naturally does not show). The female upperside (fig. 56) is exactly as in *D. cinderella* except that the pale area on the hind wing is bluish grey instead of white. The underside (fig. 59) is marked as in *D. cinderella*, but the ground colour is slightly darker.

The holotype bears two labels, a printed one detailed below (under material examined), showing it was taken by W. B. Pryer, and a second reading; '?*Eooxylides*, ? sp. nov. ♂ [in ms.]; Named 1905 in H. H. Druce [in print]'. No such name has been published.

William Burgess Pryer left England in 1877, reaching Singapore in November, and was present at the signing of a treaty at Brunei at the end of that year. After a month negotiating a treaty with the Sultan at Sulu, which was at war with Spain, he was appointed East Coast Resident of British North Borneo and landed on 11 February 1878. Within three weeks he had both founded Sandakan (syn. Elopura), and recommenced his boyhood pursuit (and that of his younger brother, H. J. S. Pryer) collecting butterflies. He remained there for most of the next 21 years, opening up the interior and several estates (including Beatrice, Bahalla or Balhala, Byte, and Pulo Bai or Bay in Sandakan Harbour). As an invalid he revisited Sulu in 1898 and, sailing for England, died at Suez in January 1899. He was survived by his wife, Ada Pryer (Pryer, 1893; Tregonning, 1954, etc.).

Material examined.

Holotype ♂ [East Malaysia: Sabah] 'Brit. N. Borneo, probably fr. East Coast Residency. Coll. 1878–1898 by W. B. Pryer. Pres. 1900 by Mrs W. B. Pryer'. (Hope Dept. of Entomology, University Museum, Oxford.)

Paratypes. [East Malaysia: Sabah] 2 ♀, 'Brit. N. Borneo, probably fr. East Coast Residency. Coll. 1878–1898 by W. B. Pryer. Pres. 1900 by Mrs W. B. Pryer'. (Hope Dept. of Entomology, University Museum, Oxford.) Sabah; 1 ♀, Kretam, 7.vi.1950 (*J. D. H. Hedley*); 1 ♀, Silam, 31.i.1892 [*D. Cator*] '2 ditto returned to Mrs Pryer 23.i.1900'.

Note. The ♀ ex coll. Cator, from Silam (100 km due south of Sandakan) was found in the BMNH with the extra label suggesting that Cator had borrowed two others from Pryer, perhaps for comparison. If so, these would be the 2 ♀

subsequently presented, together with the unique ♂ holotype, by Mrs Pryer to the Hope collection. This strengthens the probability that these three specimens were collected in Sabah near Sandakan.

Drupadia araotina (Evans) **comb. n.**

(Text-fig. 8; Pl. 2, figs. 41, 45)

Horaga araotina Evans, 1933 : 413. Holotype ♀, West Malaysia: Selangor (BMNH) [examined].

The mystery of the generic placement of this unique female will be resolved only by discovery of the male. Its tails appear to have been more ciliate than those of *Horaga* species from the same area, and the colouring of the upperside is typically *Drupadia*. It has not previously been figured.

The upperside (fig. 41) is plain dark brown with the subtornal fifth of the hind wing white crossed by dark veins. The underside (fig. 45) of the fore wing is deep ochreous, paler in the basal half and crossed obliquely by a narrow white stripe from vein 1 to the cell-end, this stripe being edged outwardly by a dark line. The hind wing basal third and apex are ochreous, the remainder white with the black markings shown in the figure; the submarginal spot in space 1 being metallic blue.

Material examined.

Horaga araotina Evans, holotype ♀, West Malaysia: Selangor west coast, Pulo Angsa [c. 1931] (*W. H. Evans*).

Note. The holotype bears no date but I think Brigadier Evans told me that he caught it while on leave after retiring from Army service.

Drupadia abnormis (Moulton) **comb. n.**

(Text-fig. 4; Pl. 2, figs 48, 51)

Biduanda sp. ?, ♀. Shelford, 1901 : 34, no. 37.
Charana? abnormis Moulton, 1911 : 156, pl. [8], fig. 10. Holotype ♀, East Malaysia: Sarawak (BMNH) [examined].
Tajuria abnormis (Moulton); Seitz, 1926 : 973.

Although discovery of the male will undoubtedly require the founding of a new genus for this, Shelford's placement was probably the closest possible. Moulton moved it to *Charana*, and called it a male, on the advice of H. H. Druce, and Seitz sank *Charana* in *Tajuria*.

Through the generosity of the Sarawak Museum the holotype is now in the BMNH, and I have been able to examine the paratype. Vein 5 of the fore wing originates close to 6, and the hind wing tails are all short. The thorax and abdomen appear stout, but this may be because both specimens have in the past suffered from mould.

The colouring and pattern on both surfaces resemble those of *D. araotina* except

for details on the underside evident from the figures. The hind wing upperside pale area is shot very light blue.

MATERIAL EXAMINED.

Charana? abnormis Moulton, holotype ♀, EAST MALAYSIA: Sarawak, Mt Penrissen [marked at figure 1], 4000 ft, v. 1899 (*R. Shelford*).

Paratype (by Moulton, *l.c.*, footnote). EAST MALAYSIA: ♀, Sarawak, Mt Kling Kang [Kelingkang, the State boundary south of Kuching], 2500 ft, x. 1911 (Sarawak Museum, Kuching, Sarawak, Malaysia).

Drupadia theda (C. & R. Felder) **comb. n.**

(Text-fig. 3; Pl. 2, figs 50, 53; Pl. 5, fig. 104)

Myrina theda C. & R. Felder, 1862 : 291.

This is the second most common and widespread species after *D. ravindra*, and nearly as many subspecies have been named, although their differences are generally less spectacular. It is the only species known from Sulawesi, where it is exceptionally large and highly differentiated.

The male upperside is chalky violet-brown with a silky gloss, the terminal cilia being brown (fig. 50). The median vein and its branches in the disc of the fore wing are typically marked in red, and the hind wing black tornal spots and hairline are narrowly bordered with bluish grey. In individuals the red veining is commonly absent, while occasionally it is extended to many more veins. The female is dark brown with a subtornal pale area on the hind wing; there is an orange discal patch on the fore wing in some subspecies which changes to white or yellow in the Philippines, and becomes a subapical whitish band in Sulawesi.

The underside (fig. 53) is similar to that of *D. ravindra* with the important difference that the hind wing postdiscal spots in spaces 5 to 7 are in echelon. Although this was pointed out long ago by de Nicéville (1890*a* : 431), the distinction has been overlooked as recently as 1926 and even 1933. In *D. ravindra* (fig. 52) the spots are paired to form rough rectangles; those in spaces 6 and 7 form one, above and outside the cell-end bar, and those in spaces 4 and 5 form another, further out and parallel to the cell-end bar. This distinction similarly separates *D. rufotaenia* (fig. 65) from *D. niasica* (fig. 73), and in fact is less fallible a guide than the presence or absence of fore wing vein 9.

The Philippine subspecies are puzzling and need further investigation in the field, particularly since one is the nominotypical *D. theda theda*. The male appears to be accompanied by three forms of female; with plain, white-banded, and yellow-banded fore wing uppersides. Semper (1890 : 218) himself remarked on this, believing that they fly together and appear to be non-seasonal. He also commented on the extreme size variation in the female with a yellow or white fore wing patch, but this can now be explained. The small specimens are males or females of the hitherto overlooked subspecies of *D. niasica*.

The distinctive light brownish purple of the male upperside, similar throughout its range to that of *D. estella*, has defeated the printers of Seitz's plates, which usually show a dense dark brown.

KEY TO SUBSPECIES OF *D. theda*

1 Large; fore wing over 20 mm (except *bangkaiensis*). Underside uniform whitish with purple-brown striations and bands; the fore wing postdiscal band oblique and directed to the tornus; the hind wing tornal metallic blue scaling extending into space 3 (Sulawesi) 13

Smaller; fore wing under 21 mm. Fore wing underside orange to ochreous grey, at least at the apex and termen, and the postdiscal band as usual parallel to the termen 2

2 Fore wing underside whitish with the apical third solid dark brownish-grey; hind wing with the tornal metallic blue scaling reaching space 3 (Philippines) ***t. theda*** (Felder) (p. 330)

– Fore wing underside colour not sharply contrasted, grading from white at the base to pale or deep orange, ochreous, or grey; hind wing metallic blue scaling seldom prominent above vein 3 3

3 Fore wing underside ground colour cream to pale orange, with the apical third strongly clouded grey; hind wing white with pale brown markings reduced to basal dots and narrow discal and postdiscal dashes.

Fore wing upperside of male usually unmarked; that of female with a large orange discal patch (Burma) . . . . . ***t. fabricii*** Moore (p. 324)

– Fore wing underside not heavily clouded, the termen evenly coloured; hind wing markings dark and bold 4

4 Fore wing underside with the postdiscal band, particularly in its costal half, much darker than the ground colour, which is unusually pale 11

– Fore wing underside with the postdiscal band dark-edged, but not itself conspicuously darker than the ground 5

5 Fore wing underside rich deep orange in the female and at least in spaces 2 and 3 in the male, which may elsewhere be greyish brown 6

– Fore wing underside dull orange, yellowish, or dull greyish brown 9

6 Fore wing upperside of male usually with a small dull red discal triangle; that of female with a small orange discal patch (South peninsular Thailand) ***t. renonga*** (Corbet) (p. 325)

– Fore wing upperside of male usually with at least a well-marked red discal triangle; that of female with at most a small diffuse orange discal streak 7

7 Fore wing underside rich deep orange in both sexes, with the markings indistinct (Bangka Is) . . . . . ***t. fulgens*** subsp. n. (p. 327)

– Fore wing underside greyish in the male, orange in the female; the markings distinct 8

8 Fore wing underside with the fine dark and white lines which edge the postdiscal bands well marked, so emphasizing the bands. Female hind wing upperside with the tornal half very pale whitish grey (Nias Is) ***t. demialba*** (Staudinger) (p. 326)

– Fore wing underside with the linear markings relatively diffuse. Female hind wing upperside as usual with the tornal pale bluish grey area narrow (Malaysian peninsula, E. Sumatra) . . . . . ***t. thesmia*** (Hewitson) (p. 325)

9 Fore wing underside orange in both sexes. Female hind wing upperside with the tornal pale area normal, blue-grey and not more than 3 mm wide 10

– Fore wing underside of male dull ochreous grey, that of female pale dull orange. Female hind wing upperside with the tornal area whitish and extensive (Sarawak, Sabah) . . . . . ***t. umara*** (Fruhstorfer) (p. 328)

10 Fore wing underside dark orange; upperside with a red triangle in the male, and a small orange spot in the female (S.E. Kalimantan) . ***t. vanica*** (Fruhstorfer) (p. 328)

– Fore wing underside pale dull orange; upperside unmarked (Palawan) ***t. unicolor*** (Staudinger) (p. 329)

11 Fore wing underside ground colour uniform whitish at least to the postdiscal band. 12

– Fore wing underside ground colour pale greyish ochreous in the male, pale ochreous in the female.

As in the next two subspecies, the fore wing upperside bears red discal markings in both sexes (Pulau Telo, off central W. Sumatra)
t. batunensis (Fruhstorfer) (p. 326)

12 Fore wing underside with orange suffusion anterior to the submarginal markings (Pagai Is) . . . . . ***t. pagiensis*** (Riley) (p. 327)

– Fore wing underside uniform white to the ochreous submarginal markings (Siberut & Sipora) . . . . . ***t. albicans*** (Riley) (p. 327)

13 Underside evenly marked overall; the fore wing postdiscal band not emphasized. Fore wing upperside of male unmarked or with a few very faintly red veins; that of female with a narrow, diffuse, oblique creamy postdiscal band (S. Sulawesi)
t. namusa (Hewitson) (p. 332)

– Underside fore wing with the postdiscal band strongly coloured or completely 'filled in' 14

14 Larger, fore wing 20–24 mm. Upperside well marked; the male with red discal veining on fore wing and often on hind wing; the female with the band wide, up to 4 mm, and clear white (N. Sulawesi) . . ***t. thaliarchus*** (Staudinger) (p. 331)

– Smaller, female fore wing 17 mm. Female fore wing upperside with the band narrow and creamy, but distinct (Bangkei Is.) . ***t. bangkaiensis*** (Ribbe) (p. 332)

Drupadia theda fabricii Moore **comb. rev.**

Drupadia fabricii Moore, 1884 : 32. Holotype ♂, BURMA (Indian Museum, Calcutta [?]).
Biduanda fabricii (Moore); Moore, 1886 : 42, pl. 4, figs 2, 3.
Biduanda imitata Druce, 1895 : 617. Holotype ♀, 'Borneo' [BURMA] (BMNH) [examined]. [Synonymized, as from Burma, by Riley, 1942 : 88.]
Biduanda fabricii (Moore); Seitz, 1926 : 987.
Biduanda imitata Druce; Seitz, 1926 : 989.
Marmessus theda fabricii (Moore) =*imitata* (Druce); Corbet, 1948 : 101.

Moore first described a 'female' specimen from Mergui, south Burma, which he stated was in the Indian Museum. Later (1886) he described and figured in colour both sexes from Mergui. The pair representing the subspecies in the BMNH Type Collection must be considered topotypes.

The male has the red veining on the fore wing upperside more often lacking than present, but in the female the orange band is wider than in any other subspecies, covering at least the central third of the wing.

The northern limit of the species is about 19°N., and this subspecies ranges through Thailand and lower Burma to about 11°N.

MATERIAL EXAMINED.

Biduanda imitata Druce, ♀ holotype, 'Borneo' [BURMA], ex coll. Rev. R. P. Murray.

BURMA: 71 ♂, 72 ♀, Karen Hills to Mergui, including topotype ♂, ♀, from Mergui; THAILAND: Phrae Dist., 2 ♂, Me Say Song, Me Lem, iv. 1918 (*E. J. Godfrey*); 1 ♀, Me Ping River, 250 ft, 5.iii.1924 (*Maj. C. H. Stockley*).

Note. 1 ♀, 'INDIA, Darjeeling' is undoubtedly a *D. theda umara*, probably from Sandakan. The labels are printed, ex colls Druce and Godman/Salvin.

Drupadia theda renonga (Corbet) **comb. n.**

Biduanda thesmia renonga Corbet, 1938 : 256. Holotype ♂, THAILAND, Ranawng (BMNH) [examined].
Marmessus theda renonga (Corbet); Corbet, 1948 : 102.

The underside markings on this subspecies are more distinct than on the last, the veins on the disc of the fore wing upperside of the male are reddened, and the female orange band on the fore wing is restricted in width and length.

It is confined to the Kra Isthmus and Langkawi Islands, but occasional individuals occur in the extreme north of peninsular Malaysia.

MATERIAL EXAMINED.

Biduanda thesmia renonga Corbet, ♂ holotype, THAILAND: Ranawng (*W. Doherty*).

Paratypes. THAILAND: 10 ♂, 11 ♀ (including allotype), Ranawng (*W. Doherty*). BURMA: 7 ♂, 5 ♀, Victoria Point, xii. 1890 (*W. Doherty*).

BURMA: 3 ♂, 8 ♀, Victoria Point. THAILAND: 2 ♀, Kra Isthmus. MALAYSIA: 1 ♂, 7 ♀, Langkawi Islands, 1952–1957 (*M. J. V. Miller*); 1 ♂, 3 ♀, i. 1957, xii. 1958, ii. 1959 (*G. C. Stubbs*), in coll. Stubbs.

Drupadia theda thesmia (Hewitson) **comb. n.**

Myrina thesmia Hewitson, 1863 : 32, pl. 14, figs 25–27. LECTOTYPE ♂, here designated, INDONESIA: Sumatra (BMNH) [examined].
Biduanda thesmia (Hewitson); Distant, 1884 : 238, figs 76, 77.
Biduanda thesmia thesmia (Hewitson), form *minara* Fruhstorfer, 1912 : 251. Holotype ♂, INDONESIA: Sumatra (BMNH) [examined]. [Synonymized by Riley, 1944 : 263.]
Biduanda thesmia (Hewitson); Seitz, 1926 : 987, pl. 159, figs f5, f6 (as '*sumatranus*'), d8.
Biduanda minara Fruhstorfer; Seitz, 1926 : 987, pl. 159, fig. d7 (as *thesmia*).
Marmessus theda thesmia (Hewitson) = *minara* (Fruhstorfer); Corbet, 1948 : 102.

This name is here used to cover specimens from the Malaysian peninsula and the whole of Sumatra. It is probable that subtle differences will be found parallel to the much greater ones of *D. ravindra* in Sumatra, but the subspecific territories and clines should be properly worked out, now that the problem is known, before naming new races.

In the BMNH Type Collection representing this taxon are a male and a female, both with plain fore wing uppersides, labelled '*thesmia*, Sumatra', ex coll. Hewitson. Of these, I now designate the male as lectotype of *Myrina thesmia* Hewitson.

Fruhstorfer introduced the name *minara* for individuals of both sexes which have fore wing upperside red or orange discal areas. Such are frequent, particularly males, throughout the range. Size, as usual, varies considerably, and some large males from different parts of Sumatra have very extensive red markings on the upperside of both wings. More usual are males with the median vein between veins 2 and 4, the basal half of vein 2, and the bases of veins 3 and 4, as well as the interspaces, all reddened, thus forming a small discal red triangle based on the anterior half of vein 2.

MATERIAL EXAMINED.

Myrina thesmia Hewitson, lectotype ♂, INDONESIA: Sumatra. *Biduanda thesmia thesmia*, form *minara* Fruhstorfer, holotype ♂, INDONESIA: north-east Sumatra (*Martin*).

Paralectotypes. *Myrina thesmia* Hewitson, INDONESIA: 1 ♀, Sumatra, *Biduanda thesmia thesmia*, form *minara* Fruhstorfer, INDONESIA: 1 ♀, north-east Sumatra (*Martin*).

WEST MALAYSIA: 25 ♂, 25 ♀, Malay Peninsula. SINGAPORE: 2 ♂, 3 ♀. INDONESIA: Lingga Islands, 1 ♀, ii. 1898 (*A. H. Everett*); Sumatra; north-east (Medan, Deli, Bekantshan, Sinabong), 18 ♂, 29 ♀; west (Korintji, Lebong Tandai), 2 ♂, 9 ♀; south-west (Marang), 12 ♂, 16 ♀ (*Doherty*); south-east (Palembang), 1 ♂, 2 ♀ (*Wallace*); no locality, 14 ♂, 19 ♀, 'Sumatra'.

Drupadia theda demialba (Staudinger) **comb. n.**

[*Sithon thesmia* (Hewitson); Kheil, 1886 : 33.]
Sithon thesmia demialba Staudinger, 1889 : 111. Holotype ♀, INDONESIA: Nias (not located).
Biduanda demialba (Staudinger); Seitz, 1926 : 987, pl. 159, figs d9, e1.
[*Marmessus theda niasica* (Röber) =*demialba* (Staudinger); Corbet, 1948 : 102.]

Kheil found the species abundant on Nias. Staudinger pointed out the peculiarity of the females, which have the tornal half of the hind wing upperside almost white. His type-material, two females and a male, does not appear to be in the BMNH. The male is normal, with a red triangle on the fore wing upperside.

Both sexes in the BMNH series vary in size from 14–19 mm fore wing length.

The name *niasica* applies to the next species.

MATERIAL EXAMINED.

INDONESIA: 42 ♂, 49 ♀, Nias [11 ♀♀ are labelled 'Sumatra'].

Drupadia theda batunensis (Fruhstorfer) **comb. n.**

Biduanda thesmia batunensis Fruhstorfer, 1912 : 272. 3 ♂, 2 ♀ syntypes, INDONESIA: Pulo Telo (not located).
Biduanda batunensis Fruhstorfer; Seitz, 1926 : 987, pl. 159, figs e2, e3.
Marmessus theda batunensis (Fruhstorfer); Corbet, 1948 : 102.

Fruhstorfer's type-material was three males and two females, all from Telo, the northernmost of the Batu islands. Only one Fruhstorfer specimen has been found in the BMNH, a male labelled simply 'Batu'.

As in Nias, the female has an orange patch on the fore wing upperside, but the hind wing is almost entirely dark brown. The underside in both sexes, unlike that of the next two subspecies, is well coloured.

MATERIAL EXAMINED.

INDONESIA: 2 ♂, 1 ♀, Pulo Telo, viii. 1896 (*I. Z. Kannegieter*); 2 ♀, Pulo Telo, xi. 1924 (*C. B. K[loss] & N. S[medley]*); 1 ♂, Batu (*Fruhstorfer*).

Drupadia theda albicans (Riley) comb. n.

Marmessus thesmia albicans Riley, 1944 : 263, pl. 1, figs 12, 13. Holotype ♂, INDONESIA: Sipora (BMNH) [examined].
Marmessus theda albicans Riley; Corbet, 1948 : 102.

The whitish underside, as characterized in the key, is very distinct. On the upperside the male has a red triangle on the fore wing, and the female a very obscure orange spot.

MATERIAL EXAMINED.

Marmessus thesmia albicans Riley, holotype ♂, INDONESIA: Sipora, x. 1924 (*C. B. K[loss] & N. S[medley]*).

Paratypes. INDONESIA: Sipora; 6 ♂, ♀ allotype, 3 ♀, x. 1924 (*C. B. K. & N. S.*); Siberut, 1 ♂, 1 ♀, ix. 1924 (*C. B. K. & N. S.*); 1 ♂, 2 ♀, ix–x. 1924 (*H. H. Karny*).

Drupadia theda pagiensis (Riley) comb. n.

Marmessus thesmia pagiensis Riley, 1944 : 263, pl. 1, fig. 11. Holotype ♀, INDONESIA: North Pagi Is (BMNH) [examined].
Marmessus theda pagiensis Riley; Corbet, 1948 : 102.

Only the female is known. The underside is characterized in the key. It is less pale than the last. The orange discal spot on the fore wing upperside is slightly larger, as well as the pale blue-grey tornal area on the hind wing.

MATERIAL EXAMINED.

Marmessus thesmia pagiensis Riley, holotype ♀, INDONESIA: north Pagi Island, x. 1924 (*C. B. K. & N. S.*) [Kloss & Smedley].

Paratypes. INDONESIA: North Pagi Island, 3 ♀, x. 1924 (*C. B. K. & N. S.*).

Drupadia theda fulgens subsp. n.

(Pl. 2, figs 50, 53)

The male upperside is violet-brown, with the cilia brown except on the hind wing between the tornus and vein 4, where they are white. The fore wing disc has a red triangle based on the anterior half of vein 2, with its inner edge along the median vein and its apex at the origin of vein 4. The female upperside is plain dark brown, with the cilia as in the male, and a narrow subtornal bluish grey area on the hind wing. In both sexes there is a black tornal spot on each side of vein 2 before the white and black ante-terminal lines. The tails are black with white fringes.

The underside, which is the distinctive feature, is very rich deep orange on the fore wing and the hind wing apex in both sexes. The rather broad fore wing postdiscal band is scarcely darker than the ground colour, and is shown mainly by its pale outlines. The hind wing except the apex is whitish with the usual markings, as shown in figure 53.

The size appears to be variable and rather small, the type-series ranging evenly from 14–17 mm in males and 12–18 mm in females. All were taken at the same time.

MATERIAL EXAMINED.

Holotype ♂, INDONESIA: Bangka Island, 1891 (*Hagen*).

Paratypes. INDONESIA: 3 ♂, 7 ♀, Bangka Island, 1891 (*Hagen*).

Drupadia theda umara (Fruhstorfer) **comb. n.**

Biduanda thesmia umara Fruhstorfer, 1912 : 251. Holotype ♀, East Malaysia: Sabah (BMNH) [examined].
Biduanda thesmia umara, form *depicta* Fruhstorfer, 1912 : 272. Holotype ♂, East Malaysia: Sabah (BMNH) [examined].
Biduanda umara Fruhstorfer; Seitz, 1926 : 987, pl. 159, fig. e4 (but not e5, which is *vanica*).
Biduanda depicta Fruhstorfer; Seitz, 1926 : 987.
Marmessus theda umara (Fruhstorfer) = *depicta* (Fruhstorfer); Corbet, 1948 : 102.

Fruhstorfer characterized this subspecies by the very white tornal fifth of the female hind wing upperside; an interesting parallel to *D. rav. surindra* and *D. ruf. kina*. The male upperside is usually unmarked, sometimes the three fore wing discal veins are faintly red, but very rarely is there a red triangle. In the complete BMNH series from Sarawak and Sabah only five males (of 60) have a distinct red triangle, and only four females (of 95) have very small, dusky, orange discal spots. The dates and localities of these appear to be random.

On the underside the male fore wing is dull ochreous grey, with the termen in spaces 1, 2, and the apex of the hind wing, brighter. The female fore wing and hind wing apex are dull brownish orange.

Fruhstorfer chose to name the more normal male, with plain upperside, as form *depicta*, so the figure by Seitz shows a red triangle.

Two possible island subspecies are noted, present material being insufficient to found new names. In the Natuna Islands the underside of the fore wing in both sexes is white, with an orange termen, an interesting parallel with the Mentawei island forms although the uppersides are plain. In Banguey [Banggi], two small females with a reduced white tornal area on the hind wing upperside have also very reduced markings on the underside, and appear to be intermediates to *D. t. unicolor* of Palawan.

Material examined.

Biduanda thesmia umara Fruhstorfer, holotype ♀, East Malaysia: Sabah, 'Nord Borneo (*H. Fruhstorfer*)' on label; Kina Balu in text. *Biduanda thesmia umara*, form *depicta* Fruhstorfer, holotype ♂, East Malaysia: Sabah, 'Nord Borneo (*H. Fruhstorfer*)', [Kina Balu in text].

Paratype. *Biduanda thesmia umara*, form *depicta* Fruhstorfer, Brunei: 1890 (*Waterstradt*), ex coll. Fruhstorfer.

East Malaysia: 60 ♂, 95 ♀, Sarawak and Sabah. Banguey [Banggi], 2 ♀, x. 1894 (*D. Cator*). Indonesia: Natunas, Bunguran, 1 ♂, 2 ♀, ix–x. 1894 (*Everett*); 1 ♂, vii–x. 1894 ([*E.*] *Hose*)[2]; Kalimantan, south, 7 ♂, 5 ♀, Pulo Laut, vi. 1891 (*W. Doherty*).

Drupadia theda vanica (Fruhstorfer) **comb. n.**

Biduanda thesmia vanica Fruhstorfer, 1912 : 251. Holotype ♀, Indonesia: South Kalimantan (BMNH) [examined].

[2] This was Ernest Hose (1872–1968), planter and zoologist in Sarawak, often confused with his cousin Edward Shaw Hose (1871–1925, son of Bishop Hose), civil servant and botanist of Malaya and Singapore. It was Ernest who collected with A. H. Everett for Lord Rothschild in the Natunas in 1894 (pers. comm., 1968).

Biduanda vanica Fruhstorfer; Seitz, 1926 : 987, pl. 159, fig. e5 (as '*umara*').
Marmessus theda vanica (Fruhstorfer); Corbet, 1948 : 102.

Fruhstorfer described this from three females. The pale area on the hind wing upperside is about half the size of that in *D. t. umara* on the holotype and one paratype, while in the third, and three other specimens, it is very narrow and blue-grey instead of white, and there is a small, dull, orange spot on the fore wing disc.

The male is quite distinct in the intense dull orange of the fore wing underside, which has no grey suffusion. The fore wing upperside of the two specimens available has a red triangle.

It is interesting that this subspecies should occupy the east coast of Kalimantan south of *D. t. umara*, but that the latter recurs further south on Pulo Laut. Specimens from central Kalimantan are needed.

MATERIAL EXAMINED.

Biduanda thesmia vanica Fruhstorfer, holotype ♀, INDONESIA: Kalimantan, south-east, 'S. Borneo (*H. Fruhstorfer*)' on label; Südost Borneo in text.

Paratypes. *Biduanda thesmia vanica* Fruhstorfer, INDONESIA: S.E. Kalimantan, 2 ♀, 'S. Borneo (*H. Fruhstorfer*)' [S.E. Borneo in text].

INDONESIA: S.E. Kalimantan; 1 ♂, 'S.O.B. (*Fruhstorfer*)'; 1 ♂, 1 ♀, Tameang Lajang (*Wahnes*); 1 ♀, S.E. Borneo (*Schönberg*). EAST MALAYSIA: 1 ♀, Kina Balu, Sabah.

Note. The last (Kina Balu) specimen is lightly marked below and may be an aberrant *D. t. umara* rather than an errant *D. t. vanica*.

Drupadia theda unicolor (Staudinger) **comb. n.**

Sithon thesmia unicolor Staudinger, 1889 : 111. 2 ♂, 7 ♀ syntypes, PHILIPPINES: Palawan (not located).
Biduanda thesmia unicolor (Staudinger); Semper, 1890 : 218.
Biduanda unicolor (Staudinger); Seitz, 1926 : 987.
Marmessus theda unicolor (Staudinger); Corbet, 1948 : 102.

This is the last, the easternmost, subspecies with the fore wing underside of the conventional pattern. Staudinger described it from two males and seven females; his type-material has not been located but its features are quite clear. H. H. Druce (1895 : 613) had seen one of Staudinger's types and established his own 'type' which is now in the BMNH, from Sandakan (!) (*Pryer*).

The female upperside is plain dark brown with no trace of a pale area on the hind wing. Thus the only upperside markings are the basic ones on the extreme margin of the hind wing between the tornus and vein 4 (or 5); cilia white, a black marginal hairline, and a white line inside it. The male upperside is similar, but of the usual dull silky violet with the disca, veins faintly red. The fore wing underside is pale dull orange, slightly paler in the malel and the hind wing markings are distinctly reduced.

As usual, this Palawan subspecies appears to recur occasionally in Sabah, on the eastern coast.

Material examined.

Philippines: Palawan; 2 ♂, 2 ♀, 'Palawan'; 1 ♀, 1898 (*Doherty*). East Malaysia: Sabah, 1 ♀, Sandakan (*Pryer*).

Note. See also under *D. t. theda* below.

Drupadia theda theda (C. & R. Felder) **comb. n.**

Myrina theda (Boisduval in litt.) C. & R. Felder, 1862 : 291. Type-material, Philippines: [Luzon] (BMNH) [♀ syntype examined].

[*Myrina theda* (Boisduval in litt.) Felder; Hewitson, 1863 : 32, pl. 16, figs 46, 47. Misidentification.]

Biduanda theda (Felder); Semper, 1890 : (5), p. 218.

Biduanda theda (Felder); Seitz, 1926 : 988, pl. 159, figs e6, e7, e8, f1.

Marmessus theda theda (Felder); Corbet, 1948 : 101–102.

The Felders' description (from the Latin) reads:

'Male upperside violaceous with the median branches on the fore wing coppery. Female upperside fuscous, the fore wing with an irregular white patch. Underside in both sexes white; the fore wing with two dark basal spots and with most of the outer half fuscous, marked with a short white fascia; the hind wings [are as usual].'

The female is like a large version of the male *D. niasica florens* shown at Plate 3, figures 72 (upperside), 76 (underside). Their description fits the male well, but for the female it might be modified to; '. . . the fore wings white with the apical third fuscous, and darker markings comprising a basal spot, a subbasal bar across the cell, a postdiscal band and a submarginal line'. Their 'short white fascia' is the white strip between my band and line.

The Felders introduced this name as of 'Boisd. in litt.', and said their material was supplied by Semper and Lorquin. Seven months later (April 1863), Hewitson figured an actual Boisduval specimen, no doubt originally expecting to publish it as a new name. Having been forestalled by the Felders, he referred to their description and gave none himself. But he sexes the specimen as a male, when it is quite different to the Felders' male.

Hewitson figured the upper and under sides of a small (fore wing 15 mm) very black insect with a white patch, which is indeed a male and is referable to *D. niasica* (see p. 339). The female *D. theda* is much larger and, like that of *D. niasica*, is not nearly so dark. Thus the Felders secured the name *theda* for the larger, dimorphic species, and the Philippine subspecies of the lesser one has remained undiscovered in its female series until now. As to Semper's collecting (1858–1861) in Luzon, Mindoro and Mindanao, see Felder (1861 : 297 n); and for Lorquin's almost simultaneous tour of the same area, and how his material reached both Hewitson and the Felders, see Boisduval (1869 : 8).

Unfortunately no original male *D. theda* has been found, only a female syntype. A lectotype is not here designated in the hope that a male may yet be found.

So much for the application of the name. Another problem now arises. There are two further forms of the female; one with a yellow patch and one with none at all, the latter like *D. t. unicolor*. Semper himself remarked that the female

patch varied from white to yellow irrespective of locality and season (noting also some very small 'females'!), and further work in the field is necessary.

MATERIAL EXAMINED.

Myrina theda Felder, syntype ♀, PHILIPPINES: [Luzon] (labelled only 'nov. gen. *theda* ♀. Philipp.').

PHILIPPINES: 3 ♂, 5 ♀ (no further locality. Includes ♀ ex coll. Boisduval labelled '*theda* Boisd.'); 1 ♂, 1 ♀, Luzon; 1 ♀, Mindoro; 1 ♀, 'Mind.'; 1 ♂, 1 ♀, 'Sumatra' [?Semerara]; 1 ♀, Cebu; 2 ♂, 5 ♀, Mindanao, Davao (*Platen*); 7 ♂, 44 ♀, S.E. Mindanao, Lanao plain, Kolambugan, v–vi. 1914 (*A. E. Wileman*).

Note. The females listed are all white-patched except one from 'Philippines' and the one from Cebu which are creamy; and all those from S.E. Mindanao of which 35 are yellow and 9 are *unicolor*. Some fading may be involved here.

Drupadia theda thaliarchus (Staudinger) **comb. n.**

Sithon thaliarchus Staudinger, 1888 : 277, pl. 95. Syntypes ♂, ♀, INDONESIA: Sulawesi north, Minahassa (not located).
Biduanda thaliarchus (Staudinger); Fruhstorfer, 1912 : 252.
Biduanda inexpectata Ribbe, 1926 : 78. Holotype ♂, INDONESIA: Sulawesi central, Watumodje (not located). **Syn. n.**
Biduanda thaliarchus (Staudinger); Seitz, 1926 : 988, pl. 146B, fig. e1.
Marmessus theda thaliarchus (Staudinger); Corbet, 1948 : 102.

This is the largest subspecies in the genus. Its features have been given in the key.

None of Staudinger's type-series of both sexes from Minahassa, collected by Dr Platen, has been located. Nor has the unique male described by Ribbe, collected by Dr Martin.

Staudinger stated that the peculiar obscure blue spots shown in his otherwise good figure were lacking on his other specimens. Such blemishes occur at random on occasional male *D. theda* specimens and appear to be due to wetting or splash from some chemical. Unfortunately Seitz reproduced those spots prominently, without comment. They should be disregarded. Staudinger also remarked that the size varied greatly, and he had one male little larger than [*Rathinda*] *amor* [fore wing 15 mm). One wonders whether his series included *D. niasica* again or, since he identified the male, perhaps *D. estella*. He did not give any upper size limit but his figured male has a fore wing of 24 mm. The BMNH series has fore wings 20–24 mm.

Ribbe introduced *D. inexpectata* for one male from Watumodje [about 2°N.120°E.], comparing it in great detail with *D. t. namusa*. It appears to differ from *D. t. thaliarchus* only in having a red triangle on the fore wing upperside. He did not state its size.

MATERIAL EXAMINED.

INDONESIA: 4 ♂, 2 ♀, North Sulawesi, Minahassa; 1 ♂, 'Celebes' [*Wallace*]; 1 ♀, 'Amboine' (ex coll. Ed. Brabant).

Drupadia theda namusa (Hewitson) **comb. n.**

Myrina namusa Hewitson, 1863 : 33, no. 19, pl. 13, figs 23, 24. Type-material ♀, INDONESIA: South Sulawesi, Macassar (not located).
Myrina naenia Hewitson, 1863 : 33, no. 20, pl. 13, figs 21, 22. Holotype ♂, INDONESIA: 'Celebes' [South Sulawesi] (BMNH) [examined].
Biduanda namusa (Hewitson); Seitz, 1926 : 988, pl. 146B, figs e2, e3.
Biduanda naenia (Hewitson); Seitz, 1926 : 988, pl. 146B, figs d6, d7.
Marmessus theda namusa (Hewitson) =*naenia* (Hewitson); Corbet, 1948 : 102.

Hewitson described the female (*namusa*) and the male as distinct because of slight individual variation in the depth of shading in some of the underside markings. The two names appear never to have been synonymized until Corbet, as first reviser, gave priority to the name *namusa*. Unfortunately the only surviving type-specimen is that of *naenia*.

This subspecies from southern Sulawesi is slightly smaller than *D. t. thaliarchus* (fore wing 18–21 mm); the female upperside whitish band is very narrow and diffuse, and the underside markings paler.

One male in the BMNH has the written entry '*naenia*. Makian' on its printed 'coll. Hewitson' label. Makian is a small island in the Halmahera group opposite to Minahassa, surprisingly far from Macassar. Underneath the label is gummed a smaller one, like so many of Wallace's ones, with the entry 'Mak'. This could be an error for Macassar, but Wallace did collect 'a few interesting insects' on the east coast of Makian, on 12 October 1858.

MATERIAL EXAMINED.

Myrina naenia Hewitson, holotype ♂, INDONESIA: [South] Sulawesi.

INDONESIA: 3 ♂, Sulawesi [south] (*Wallace*); 1 ♂, 'Makian' [? Macassar] (ex coll. Hewitson); 1 ♀, Macassar (ex coll. Hewitson); 7 ♂, 14 ♀, S. Sulawesi, viii–ix. 1891 (*W. Doherty*); 1 ♂, 7 ♀, S. Sulawesi, Pic de Bonthain, 1000–2000 m, 1896 (*W. Doherty*); 4 ♀, Macassar, 1896 (*W. Doherty*); 2 ♀, 'Celebes', x. 1923 (*C. J. Brooks*).

Drupadia theda bangkaiensis (Ribbe) **comb. n.**

[*Biduanda namusa* (Hewitson); Fruhstorfer, 1912 : 252, Toli Toli, N.W. Sulawesi. Misidentification.]
Biduanda bangkaiensis Ribbe, 1926 : 80. Holotype ♀, INDONESIA: Bangkai [Banggai] Island (not located).

This is an unsatisfactory taxon. Ribbe described only the female, comparing it briefly with *D. t. namusa* without mentioning *Biduanda inexpectata* to which he had just devoted a whole page, and giving no indication of its size.

If interpreted correctly, his description covers three 'unattached' females in the BMNH from scattered localities, as listed below. All are small, with fore wing 16–17 mm.

Fruhstorfer said he did not know *Biduanda naenia* and had found in his short visits to Sulawesi only one specimen of what he called *B. namusa*, at the north-

western extreme of Sulawesi. This specimen is in the BMNH and is certainly neither, being too small.

Pending discovery of males, this seems to be the most suitable position for Ribbe's name, and the only possible identification at present for these three specimens, one of which is from the type-locality.

MATERIAL EXAMINED.

INDONESIA: 1 ♀ [fore wing 17 mm], Bangkei [Banggai], 1885 (*H. Kühn*); 1 ♀ [fore wing 17 mm], Sulawesi, N.E., Minahassa; 1 ♀ [fore wing 16 mm], Sulawesi, N.W., Toli Toli, xi–xii. 1895 (*H. Fruhstorfer*).

Drupadia niasica (Röber) **comb. n.**

(Pl. 3, figs 69–76; Pl. 5, fig. 105)

Sithon niasica Röber, 1886 : 68, pl. 5, fig. 20.

This name, introduced with a good description and figure, was for long obscured by repeated errors and now, rather embarrassingly, covers a species ranging from Burma through Kalimantan to the Philippines. Within three years of Röber's publication, Staudinger created a primary homonym, which he corrected to *Sithon niasicola*, but that insect had already been named *D. caesarea* by Weymer. Fruhstorfer (1912 : 249) placed Röber's insect between Weymer's and his own *D. rufotaenia*, saying wrongly that the underside was like *D. ravindra moorei*. Seitz explained Staudinger's nomenclature errors correctly and figured the correct *D. caesarea* female, but figured the brilliant male as *niasica* Röber. Finally, the name was misapplied to a subspecies of *D. theda* (see Cowan, 1965).

This species bears exactly the same relationship to *D. theda* as does *D. rufotaenia* to *D. ravindra*. Its underside markings are identical to those of *D. theda*, it is smaller, lacks male insignia and is not strongly sexually dimorphic, it seems to cover the same range, and its geographic variation approximates to that of the female *D. theda*.

The size is about two-thirds that of *D. theda*. The upperside is dark brown, more intense and sometimes with a faint transparent violet wash in the male, and often with an orange, yellow or white fore wing discal patch.

KEY TO SUBSPECIES OF *D. niasica*

1 Fore wing underside uniform dark purple-brown in the apical third, from end cell to near tornus; the remainder and hind wing underside uniform whitish or cream, with dark brown markings 9
– Fore wing underside not with two strongly contrasted ground colours . . . 2
2 Fore wing underside ground colour shading from whitish dorsally to pale yellow, with the apical quarter lightly suffused with transparent grey 3
– Fore wing underside white to orange or dark brown 4
3 Fore wing upperside with a large discal patch; diffuse, ovate, and whitish to dull orange in the male; clear, oblique, and bright orange in the female. Hind wing

upperside with a pale grey area; discal and of variable extent in the male, filling at least the basal halves of spaces 3 to 5; subtornal and restricted in the female (Burma) . . . . . ***n. scudderii*** (Doherty) (p. 334)

– Upperside of male as usual dark brown with a violet wash, and with small, diffuse pale discal areas; orange on fore wing and grey on hind wing, each with a dark dot at the cell end (Langkawi Is) . . . . . ***n. biranta*** (Riley) (p. 335)

4 Fore wing underside bright or dark orange.
Upperside unmarked except for the narrow tornal grey area on the female hind wing (West Malaysia) . . . . . ***n. perlisa*** (Riley) (p. 335)

– Fore wing underside not bright or dark orange 5

5 Upperside unmarked, but the hind wing tornal third very pale grey in both sexes. Fore wing underside dull grey-brown (Nias Is) . ***n. niasica*** (Röber) (p. 335)

– Hind wing upperside without a wide pale tornal area 6

6 Fore wing upperside with an orange patch in the bases of spaces 2 and 3. Fore wing underside dull orange-brown (Pulo Telo, Batu Is.)
n. ianthina subsp. n. (p. 336)

– Fore wing upperside with at most an orange dot against the origin of vein 3 . . 7

7 Fore wing underside mainly white, only the termen greyish brown (Siberut & Sipora Is.) . . . . . ***n. karnyi*** (p. 336)

– Fore wing underside well coloured as usual.
Upperside uniform dark brown with a narrow grey tornal area on the hind wing; the male obscurely shot with violet except for distinct marginal borders . 8

8 Fore wing underside of male uniform dull grey-brown; that of female dull orange (S.W. Sumatra) . . . . . ***n. dohertyi*** (Riley) (p. 336)

– Fore wing underside shading from whitish at base to dark orange-brown in male, dull yellow-brown in female (Pulo Laut, S. Kalimantan) . ***n. ultra*** subsp. n. (p. 337)

9 Upperside dark brown, the fore wing with a large white discal patch (N. Philippines)
n. thaenia (Druce) (p. 337)

– Fore wing upperside with the discal patch yellow (S. Philippines)
n. florens subsp. n. (p. 338)

Drupadia niasica scudderii (Doherty) comb. n.

Biduanda scudderii Doherty, 1889 *b* : 426, pl. 23, fig. 14. Holotype ♂, South Burma (not located).
Biduanda scudderii Doherty; Nicéville, 1890 *a* : 427.
Biduanda scudderi Doherty; Seitz, 1926 : 988.
Marmessus scudderii scudderii (Doherty); Riley, 1942 : 88.
Marmessus niasicus scudderii (Doherty); Cowan, 1965 : 167.

The upperside is dark brown; the fore wing with a yellow discal patch in the male and a slightly larger orange one in the female; the hind wing with a greyish subtornal pale area. In the male the wings are overlaid with an obscure transparent violet wash. The underside is marked exactly as that of *D. theda fabricii*, the fore wing ground colour being pale dull orange. The fore wing length is 11–13 mm.

Doherty did not say where the holotype was placed. There was only one specimen, a male taken at Mergui, i–iii. 1889, 'at the height of the dry season' (Doherty, 1889 *b* : 409). De Nicéville said he had seen it, which suggests that it was not lodged at Calcutta. Possibly, with specimens described earlier that year, it was sent to B. Neumoegen (Doherty, 1889 *a* : 123), and subsequently passed to the U.S. National Museum or the Carnegie Museum (Cowan, 1966 *b* : 418).

MATERIAL EXAMINED.

SOUTH BURMA: 6 ♂, 1 ♀ (Ataran, Kanbauk, Dawna Hills); 2 ♂, 1 ♀, Tavoy; 7 ♂, 2 ♀, Mergui; 2 ♂, 2 ♀, Victoria Point; 1 ♂, 'Birmanie'.

Drupadia niasica biranta (Riley) comb. n.

Marmessus scudderii biranta Riley, 1942 : 88. Holotype ♂, WEST MALAYSIA: Langkawi Is. (BMNH) [examined].
Marmessus scudderii biranta Riley, 1944 : 265, pl. 1, fig. 16, pl. 2, fig. 29.
Marmessus niasicus biranta Riley; Cowan, 1965 : 167.

The orange patch on the fore wing of this subspecies is diffuse and smaller than in the last, and the upperside and underside are appreciably darker. The fore wing length is 13–14 mm.

MATERIAL EXAMINED.

Marmessus scudderii biranta Riley, holotype ♂, WEST MALAYSIA: Langkawi Islands, 15.i.1939 (*J. N. Eliot*).

WEST MALAYSIA: Langkawi Islands, 1 ♂, 25.ii.1960 (*G. C. Stubbs*) (in coll. Stubbs).

Drupadia niasica perlisa (Riley) comb. n.

Marmessus scudderii perlisa Riley, 1942 : 88. Holotype ♂, WEST MALAYSIA: Perlis (BMNH) [examined].
Marmessus scudderii perlisa Riley; Riley, 1944 : 265, pl. 1, fig. 17, pl. 2, fig. 28.
Marmessus scudderii perlisa Riley; Eliot, 1959 : 382.
Marmessus niasicus perlisus Riley; Cowan, 1965 : 167.

This subspecies is very much darker than the last both above and below, and there is at most a faint trace only of the fore wing discal patch on the upperside. The fore wing length is 12–14 mm.

The type-locality is on the northern boundary of Malaysia, but the name can be applied to specimens from Perlis southwards, probably to Singapore.

MATERIAL EXAMINED.

Marmessus scudderii perlisa Riley, holotype ♂, WEST MALAYSIA: Perlis, Kaki Bukit, 200 ft, 8.i.1939 (*C. F. Cowan*).

WEST MALAYSIA: 1 ♀, Perlis, Kaki Bukit, 20.xi.1953 (*C. F. Cowan*); 1 ♀, Negeri Sembilan, Pantai Waterworks (on clipped *Hybiscus*), 5.ix.1958 (*H. L. Lewis*); 1 ♂, Selangor, 16 miles from Kuala Lumpur, Pahang Road, 13.iv.1956 (*J. A. Hislop*) (in coll. Hislop).

Drupadia niasica niasica (Röber) comb. n.

(Pl. 3, figs 69, 73)

Sithon niasica Röber, 1886 : 68, pl. 5, fig. 20. Holotype ♂, INDONESIA: Nias Is. (not located).
Marmessus niasica (Röber); Fruhstorfer, 1912 : 249.
Marmessus niasicus niasicus (Röber); Cowan, 1965 : 167.

The error which resulted in Seitz (1926, pl. 159, fig. 16) misapplying this name

to the *D. ravindra caesarea* male has already been noted. Röber's description and figure are good.

The upperside is plain dark brown with the subtornal third of the hind wing pale greyish white. The male is obscurely washed violet. On the underside the markings are as in *D. theda demialba*, and the fore wing ground colour is greyish brown. Fruhstorfer said that the hind wing markings were like those of *D. ravindra moorei*, which is incorrect. The fore wing length is 14 mm (Röber gave the expanse as 23 mm).

MATERIAL EXAMINED.

INDONESIA: 1 ♂, Nias; 1 ♀, 'Sumatra'.

Drupadia niasica ianthina subsp. n.

(Pl. 3, figs 70, 74)

On the upperside this subspecies is reminiscent of the Burmese *D. n. scudderii*. Both sexes are dark brown with a rather small but well defined orange discal patch on the fore wing, and the subtornal third of the female hind wing is pale greyish white. The male is violet washed as usual. On the underside the fore wing ground colour is orange-brown, and the dark brown markings are normal (fig. 74). The fore wing length is 14 mm.

MATERIAL EXAMINED.

Holotype ♂, INDONESIA: Pulo Telo (Batu Is), viii. 1896 (*I. Z. Kannegieter*).

Paratype. 1 ♀, INDONESIA: Pulo Telo, xi. 1924 (*C. B. K. & N. S.*) [Kloss & Smedley].

Drupadia niasica karnyi (Riley) comb. n.

Marmessus scudderii karnyi Riley, 1944 : 264, pl. 1, figs 1, 20. Holotype ♂, INDONESIA: Siberut (BMNH) [examined].
Marmessus niasicus karnyi Riley; Cowan, 1965 : 167.

The fore wing upperside is plain, or with a small and very diffuse orange spot, and the hind wing subtornal pale area is likewise diffuse and restricted. The underside is distinctive in that the fore wing ground colour is mostly whitish, as in *D. theda albicans*. Some of the female paratypes are quite large (up to 16 mm fore wing length), and it is difficult to say with confidence that they are not the latter species. Male fore wing length 13–14 mm.

MATERIAL EXAMINED.

Marmessus scudderii karnyi Riley, holotype ♂, INDONESIA: Siberut, 30.ix.1924 (*H. H. Karny*).

Paratypes. INDONESIA: 3 ♀, Siberut, ix. 1924 (*C. B. K[loss] & N. S[medley]*); 1 ♂, 2 ♀, Sipora, x. 1924 (*C. B. K. & N. S.*); 2 ♀, Sipora, x–xi. 1924 (*H. H. Karny*); 1 ♂, N. Pagi Is, x. 1924 (*C. B. K. & N. S.*).

Drupadia niasica dohertyi (Riley) comb. n.

Marmessus scudderii dohertyi Riley, 1944 : 264, pl. 1, figs 18, 19. Holotype ♂, INDONESIA: S.W. Sumatra (BMNH) [examined].
Marmessus niasicus dohertyi Riley; Cowan, 1965 : 167.

The fore wing upperside orange spot is faint or absent, and the restricted pale area on the hind wing is distinctly tinted blue. The ground colour of the fore wing is greyish brown in the male, and brownish orange in the female.

These appear to be the only specimens of *D. niasica* so far recorded from the main island of Sumatra.

MATERIAL EXAMINED.

Marmessus scudderii dohertyi Riley, holotype ♂, INDONESIA: S.W. Sumatra, Marang, 1890 (*W. Doherty*).

Paratypes. INDONESIA: ♀ allotype, 2 ♂, 2 ♀, S.W. Sumatra, Marang, 1890 (*W. Doherty*).

INDONESIA: 1 ♂, W. Sumatra (ex coll. Fruhstorfer, with his type label but no other data).

Drupadia niasica ultra **subsp. n.**

(Pl. 3, figs 71, 75)

This subspecies is very dark brown on the upperside, unmarked except for some sparse grey scales near the hind wing tornus. It is the only subspecies so far described whose male has no discernible violet wash on the upperside, a feature which becomes obsolete from Borneo eastwards. The underside is boldly marked with dark brown in the usual pattern (fig. 75), the ground colour of the fore wing being whitish at the dorsum shading to brown anteriorly. The fore wing length is 12–13 mm for the two males of the type-series.

Included under this name until fuller material becomes available are six further specimens from scattered localities in Sarawak and Sabah which probably represent one or more larger subspecies, with a more extensive and sometimes bluish subtornal pale area on the hind wing upperside, and a darker fore wing underside. These are not included as paratypes. In connection with the first listed and least divergent, from 'Borneo', it is noted that F. D. Godman, its acquisitor, and H. J. Elwes, were brothers-in-law and had frequent correspondence.

MATERIAL EXAMINED.

Holotype ♂, INDONESIA: South Kalimantan; Pulo Laut, vi. 1891 (*W. Doherty*) (ex coll. H. J. Elwes).

Paratype. 1 ♂, INDONESIA: South Kalimantan; Pulo Laut, vi. 1891 (*W. Doherty*) (ex coll. H. J. Elwes).

Specimens excluded from the type-series. INDONESIA [?]: 1 ♂, 'Borneo' (ex coll. Godman & Salvin). EAST MALAYSIA: Sarawak, 1 ♂ (*Native collector*) [no other data]; Sabah; 1 ♂, Meleman, 5.ix.1919; 1 ♀, Bahalla Is [Sandakan], 14.v.1894 (*D. Cator*); 1 ♀, Sandakan, 9.ix.1894 (*D. Cator*); 1 ♂, Quoin, 8.xi.1961 (*T. Norman*) (in coll. Norman).

Drupadia niasica thaenia (Druce) **comb. n.**

Biduanda thaenia Druce, 1895 : 614, pl. 34, fig. 2. Holotype ♀, EAST MALAYSIA: Sabah [? WEST PHILIPPINES] (BMNH) [examined].

Biduanda thaenia Druce; Seitz, 1926 : 988, pl. 147, fig. c5 (as '*taenia*').
Marmessus theda thaenia (Druce); Corbet, 1948 : 102.

The unique female is dull brown on the upperside, with a large diffuse white fore wing patch. The underside is white with the fore wing apex shaded pale brown, and the usual markings are faintly indicated in darker brown. The fore wing length is 15 mm.

Seitz copied Druce's figure, but it is reproduced in intense black and white. If this is allowed for, it gives an excellent impression of the insect. His text however is most misleading, saying that the hind wing upperside has a violet reflection and the underside resembles *D. scaeva*.

Corbet very reasonably placed this as a subspecies of *D. theda*, but that was before it was realized that *D. niasica* flies in the Philippines, where it resembles a small *D. theda* female. The present specimen is just like a small white-banded *D. theda* female on the upperside, and is intermediate between it and Bornean *D. niasica* on the underside. Recalling that Palawan and Sulu subspecies of other species are occasionally found as individuals in east Sabah, it seems most likely that this specimen represents a western Philippine subspecies of *D. niasica*. It might even have been taken there by Pryer during his early travels, and mislabelled.

Support for this view is afforded by a specimen found among a series of white-banded *D. theda* females. It is small (fore wing length 14 mm) and, despite its age, is nearly black instead of brown on the upperside. It lacks abdomen and legs but its appearance strongly suggests that it is a male. It formerly belonged to Boisduval (who originally proposed the ms. name *theda*), and its only other label is 'Jalajala'. The only place of this name traceable was on the east coast of the eastern of two peninsulas on the north shore of Laguna de Bay, south-east of Manila, Luzon (nearly opposite the town of Santa Cruz). It is marked only on old maps and may have been a plantation. It sometimes appears as Halahala. The underside of this presumed male is, as one would expect, heavily marked like the Luzon *D. theda*, and both surfaces resemble the *D. niasica florens* male (figs 72, 76) although that has a yellow patch.

Until further material of *D. niasica* from intervening areas becomes available, these two specimens are assumed to represent a N.W. Philippine subspecies of it.

MATERIAL EXAMINED.

Biduanda thaenia Druce, ♀ holotype, EAST MALAYSIA: Sabah [? WEST PHILIPPINES], 'Sandakan' (*Pryer*) (ex coll. Godman & Salvin).

[PHILIPPINES: Luzon,] 1 ♂ [?], Jalajala [50 km S.E. of Manila] (ex coll. Boisduval, *via* coll. Oberthür).

Drupadia niasica florens subsp. n.

(Pl. 3, figs 72, 76)

[*Myrina theda* (Boisduval in litt.) Felder; Hewitson, 1863 : 32, pl. 16, figs 46, 47. Misidentification.]

The upperside is very dark brown with an oblique bright yellow patch on the central third of the fore wing, from near mid-costa to near tornus (fig. 72), and with the usual two black tornal spots on the hind wing crowned with obscure grey lunules. The underside (fig. 76) is creamy white with the usual dark brown markings, and the apical third of the fore wing dark chocolate-brown. The female upperside is slightly paler than that of the male but the fore wing patch is brighter. The fore wing length is 13–17 mm (male 13–15 mm).

The type-series was found among the fine collection of *D. theda* females made in Mindanao by Wileman. It is hoped that further examples, both white and yellow patched, may now be found from this and other islands. The possibility of *D. niasica* occurring in Sulawesi is suggested, and it is even possible that *Biduanda bangkaiensis* Ribbe (see under *D. theda*) may be a subspecies of it.

Hewitson's figure of a Boisduval specimen labelled *theda* has already been mentioned (p. 330). It closely resembles *florens* but has a white patch like the 'Jalajala' specimen of *thaenia*. Hewitson sexed it as male. It certainly is not a male *theda*, but could well be a male *niasica*. It came from Mindanao, so may be placed as a white form of *florens* pending further material.

MATERIAL EXAMINED.

Holotype ♂, PHILIPPINES: Mindanao, Kolambugan, Lanao Plains, 12.vi.1914 (*A. E. Wileman*).

Paratypes. PHILIPPINES: Mindanao, 12 ♂, 8 ♀, Kolambugan, Lanao Plains, 19.v.–19.vi.1914 (*A. E. Wileman*).

Drupadia estella (Hewitson) **comb. n.**

(Pl. 2, figs 57, 60; Pl. 6, fig. 106)

Myrina estella Hewitson, 1863 : 31, pl. 16, figs 50, 51.

The upperside is nearest to *D. theda*, but is less variable geographically. The chalky-purple male is of the same hue but never has red veining and always has a narrow (1 mm) dark brown terminal border to both wings (fig. 57). The female is dark brown with a bluish or greyish white subtornal area on the hind wing and, in Burma, a diffuse orange patch on the fore wing.

The underside (fig. 60) is distinctive, with chocolate-brown markings on white, except in Burma where it closely approaches the appearance of *D. scaeva melisa* (fig. 82). There is considerable size variation in Malaysia and Indonesia, but material is insufficient to analyse its nature.

Always rare, the known range of the species is only from Burma south of 18° North to Sumatra, south Kalimantan and Sabah. Males greatly preponderate in collections from the continent, and females from the islands.

KEY TO SUBSPECIES OF *D. estella*

1 Underside with all markings reduced to small dots and dashes. Female fore wing upperside with a distinct orange patch (Burma) . ***e. nicevillei*** (Doherty) (p. 340)
– Underside with the markings bold, in dark red-brown or black. Female fore wing upperside plain dark brown, or at most with a discal reddish flush . . . 2

2 Fore wing underside with the termen bright orange, at least to vein 4 (West Malaysia) ***e. semperna*** (Corbet) (p. 340)

– Fore wing underside with the termen dull reddish brown (Sumatra, Kalimantan, Sabah) . . . . . ***.e. estella*** (Hewitson) (p. 340)

Drupadia estella nicevillei (Doherty) comb. n.

Biduanda nicevillei Doherty, 1889 : 426, pl. 23, fig. 16. 2 ♂ syntypes, BURMA (not located).
Biduanda nicevillei Doherty; Nicéville, 1890 *a* : 428.
Biduanda nicevillei Doherty; Evans, 1921 : [38], no. 37f.
Biduanda nicevillei Doherty; Seitz, 1926 : 988.
Marmessus estella nicevillei (Doherty); Corbet, 1944 : 40.

Doherty described two males of the unmistakeable insect now well known from Myitta, near Tavoy, south Burma (not to be confused with Myittha, north of Meiktila on the road to Mandalay). They were purple, but that colour defeated the printers who made it nearly black, as did Seitz. His syntypes are probably with that of *B. scudderii* (see *D. niasica scudderii* above).

The female was not found for over 30 years and even then its identity was debated. Evens (1921) diagnosed it correctly but in the same issue of the *Journal*, Ollenbach confused it with the very similar *D. scaeva melisa* (q.v.).

MATERIAL EXAMINED.

BURMA: south, 12 ♂, 1 ♀, Kanbauk, Pagaiye, Tavoy, etc.

Drupadia estella semperna (Corbet) comb. n.

(Pl. 2, figs 57, 60)

Marmessus estella semperna Corbet, 1944 : 40. Holotype ♂, WEST MALAYSIA (BMNH) [examined].

Described under the species heading and in the key, this subspecies is larger than that in Burma, the fore wing length being 15–16 mm, as opposed to 13–15 mm. The holotype, like some other hill specimens, is exceptionally large at 17 mm (Corbet's 14·5 mm must be an error).

This subspecies is very poorly represented in the BMNH.

MATERIAL EXAMINED.

Marmessus estella semperna Corbet, holotype ♂, WEST MALAYSIA: Frasers Hill, 4000 ft, 2.vi.1938 (*J. N. Eliot*).

WEST MALAYSIA: 2 ♂, Perak, Maxwell's Hill, 13–14.vi.1953 (*C. F. Cowan*); 1 ♀. Langkawi Is, 15.i.1939 (*J. N. Eliot*) (in coll. Eliot).

Drupadia estella estella (Hewitson) comb. n.

Myrina estella Hewitson, 1863 : 31, pl. 16, figs 50, 51. LECTOTYPE ♂, here designated, INDONESIA: Sumatra (BMNH) [examined].

Sithon estella (Hewitson); Snellen, 1890 : 299.
Biduanda estella (Hewitson); Nicéville & Martin, 1896 : 480, no. 483.
[*Biduanda nicevillei* Doherty; Nicéville & Martin, 1896 : 480, no. 485.]
Marmessus estella (Hewitson); Seitz, 1926 : 990, pl. 159, figs f9, f10.

Hewitson described both sexes and figured the male. His syntypes are in the BMNH. I now designate the male as lectotype of *Myrina estella* Hewitson.

Snellen recorded a female from Billiton [Belitoeng]. De Nicéville & Martin, saying they had not found *B. estella* in Sumatra, went on to describe specimens in error as 'the hitherto unknown female of *B. nicevillei*'.

As already noted, Seitz's figure of the male should be purple, not black. His figure of the female is very large (fore wing 18 mm), and the tornal half of the hind wing is white, corresponding to two females ex coll. Martin from the Battack Mountains. There may be a good subspecies near Sibolga of which these are outlying examples. High altitude specimens are often large, and there are some females nearly as big from Kina Balu which otherwise do not differ from the normal.

Material examined.

Myrina estella Hewitson, lectotype ♂, Indonesia: Sumatra (ex coll. Hewitson).

Paralectotype. 1 ♀, Indonesia: Sumatra (ex coll. Hewitson).

Indonesia: 7 ♂, 5 ♀, Sumatra (ex colls Hewitson, Wallace, and Felder); 2 ♀, N.E. Sumatra, Battack Mountains, xii. 1892, i. 1895 (*Martin*); Kalimantan, 1 ♂, 4 ♀, Pulo Laut, vi. 1891 (*W. Doherty*). East Malaysia: Sabah, 9 ♀, Kina Balu (*Waterstradt*); 1 ♀, Kina Balu (ex coll. Fruhstorfer, labelled 'Type' and 'f. *depicta* Fruhst.', which can only be an error).

Drupadia scaeva (Hewitson) **comb. n.**

(Text-fig. 7; Pl. 3, figs 77–84; Pl. 6, fig. 107)

Myrina scaeva Hewitson, 1863 : 30, pl. 15, figs 39, 40.

This is the only member of the genus found north of Burma. Its four subspecies are markedly diverse, and that from Sikkim is comparatively large. It appears to be rare throughout its range except in South Burma, where both sexes have been obtained in plenty.

In the male the fore wing dorsum is slightly lobed in the basal half, the lobe overlapping an obscure oval brand in the base of space 7 and a bright orange streak which runs along the costa of the hind wing. This streak becomes whitish in *D. s. scaeva*. The occurrence of dwarf males is discussed under *D. s. scaeva*.

Key to Subspecies of *D. scaeva*

1 Larger, fore wing length at least 15 mm. Underside finely etched with curved lines and minutely mottled in black on very pale grey. Female fore wing upperside with a broad L-shaped orange patch covering the end of the cell and the bases of spaces 2 and 3, bisected by the black disco-cellular vein and vein 3 . . 2

– Smaller, fore wing not over 15 mm. Underside, particularly of fore wing, more solidly marked, in brown on white. Female fore wing upperside normally unmarked 3

2 Male fore wing upperside with a clear white discal patch; the hind wing upperside tornal half dull greyish blue (Sikkim, Bhutan) . . . ***s. cyara*** (Hewitson) (p. 342)

– Male fore wing upperside plain black; hind wing shining deep violet (N. Burma; N. Thailand) . . . . . ***s. cooperi*** (Tytler) (p. 343)

3 Male fore wing upperside plain black; hind wing tornal half shining deep blue (S. Burma) . . . . . ***s. melisa*** (Hewitson) (p. 343)

– Male fore wing upperside with a shining light blue patch (absent in dwarfs) filling the bases of spaces 2 and 3 and bisected by the black vein 3; hind wing with the tornal half a matching light blue (Peninsular Malaysia; Sumatra; Borneo/Kalimantan) ***s. scaeva*** (Hewitson) (p. 344)

Drupadia scaeva cyara (Hewitson) **comb. n.**

(Pl. 3, figs 77, 81)

[*Myrina melisa* '♀' Hewitson, 1869 : Suppl. p. 6, Suppl. pl. 3, figs 82, 83. Misidentification.]
Myrina cyara Hewitson, 1878 : Suppl. p. 26, Suppl. pl. 3b, figs 109, 110. Holotype ♀, INDIA: Darjeeling (BMNH) [examined].
Biduanda cyara (Hewitson); Nicéville, 1890*a* : 427.
Biduanda cyara (Hewitson); Riley & Godfrey, 1921 : 187.
Biduanda cyara (Hewitson); Seitz, 1926 : 988, pl. 146B, figs d2, d3 (as *melisa*), d4, d5.
Biduanda melisa cyara (Hewitson); Evans, 1925 : 766.
Marmessus scaeva cyara (Hewitson); Cantlie, 1963 : 135.

Hewitson described as the two sexes of *Myrina melisa* a male from south Burma and a 'female' from Darjeeling, north India, figuring the latter. He later described as *Myrina cyara* a specimen from Darjeeling, sex not stated but in fact a female, which pairs with the 'female' *melisa*. While *melisa* was used for the more familiar insect, the uncertainty over the name for the rare northern one persisted long enough to mislead Seitz. However, Riley & Godfrey, acting as first revisers, pointed out the error of Hewitson (1869) and selected his unfigured male to represent *melisa*, so leaving *cyara* valid for this subspecies, the situation being consolidated by Evans.

This subspecies is rare but now well known from Sikkim and reputedly spans the Ganges basin to north-west Burma, but I can find neither definite records nor specimens from there. The distinctive white patch on the male fore wing, and to some extent the underside, are interesting parallels to *D. achaja*.

MATERIAL EXAMINED.

Myrina cyara Hewitson, ♀ holotype, INDIA: West Bengal (north), Darjeeling (ex coll. Hewitson).

INDIA: West Bengal (north), 1 ♂ (*Myrina melisa* Hewitson syntype '♀'), Darjeeling. BHUTAN: 1 ♂, viii. 1892 (*G. C. Dudgeon*). SIKKIM: 2 ♂, Gangtok, 4000 ft, 21.viii.1934 (*J. N. Eliot*) (in coll. Eliot).

Note. It may be that the 'Darjeeling' examples were collected in Sikkim, but it is as likely that they were taken before the forests round Darjeeling were cleared.

Drupadia scaeva cooperi (Tytler) comb. n.

[*Biduanda cyara* (Hewitson); Riley & Godfrey, 1921 : 187.]
Biduanda melisa cooperi Tytler, 1940 : 123. Holotype ♂, BURMA: Maymyo [examined].

This is a little-known subspecies, not in Cantlie (1963). The female remains much as that of *D. s. cyara*, but smaller. The male, however, is very close to *D. s. melisa*, only the hind wing is dark purple-blue instead of blue.

MATERIAL EXAMINED.

Biduanda melisa cooperi Tytler, holotype ♂, BURMA: north-east [Maymyo], Anisakan, 14.ix.1926 [*G. Cooper*]. [Anisakan is 'the waterfall below Maymyo' Evans, 1922 : 516].

Paratype. THAILAND: S.E., 1 ♂, [near Sri Racha, south-east of Bangkok] Nong Khai Ploy, 21.iv.1914 (*E. J. Godfrey*).

THAILAND: north, 1 ♀, Phrae, Me Song, 24.iv.1916 (*E. J. Godfrey*); south-east, 1 ♂ (wings only), Chantabun, Khao Sabap, iii. 1934 (*J. Macbeth*).

Drupadia scaeva melisa (Hewitson) comb. n.

(Pl. 3, figs 78, 82)

Myrina melisa Hewitson, 1869 : Suppl. p. 6 [not figured]. LECTOTYPE ♂, here designated BURMA (BMNH) [examined].
Biduanda melisa (Hewitson); Doherty, 1889 : 425.
Biduanda melisa (Hewitson); Riley & Godfrey, 1921 : 187.
Biduanda melisa (Hewitson); Evans, 1921 : [38], no. 37f, ♀.
[*Biduanda nicevillei* Doherty; Ollenbach, 1921 : 134, pl. 27, fig. 14, ♀. Misidentification.]
Biduanda melisa melisa (Hewitson); Evans, 1925 : 766, pl. 29, fig. 77.1.
Biduanda melisa (Hewitson); Seitz, 1926 : 988, pl. 159, fig. f4 (as *scaeva* ♀).
Biduanda scaeva melisa (Hewitson); Corbet, 1940 : 6.
Marmessus scaeva melisa (Hewitson); Cantlie, 1963 : 135.

In the BMNH type collection are Hewitson's syntypes of *Myrina melisa*, the male being that of the present subspecies and the 'female' being the male from Darjeeling whose female he later named *Myrina cyara*. Riley & Godfrey stated the correct situation and established the present usage of the names, to safeguard which I now formally designate the male syntype as lectotype of *Myrina melisa* Hewitson.

The full situation was not realized by Corbet in 1940, and he cited the Seitz figures without comment. Evans first separated the female from that of *D. estella nicevillei*, which it very closely resembles in Burma; but in the same publication Ollenbach reversed their identities.

This subspecies is well represented in the BMNH from the Moulmein area southwards to Victoria Point, the extreme south of Burma, all dated specimens being in November to March, the dry season. The pair from Ranawng, just across the Thailand border, is undated, but I think the only time Doherty visited Ranawng was in December 1890, *en route* from Marang and Enggano *via* Singapore

and Perak to Calcutta (Hartert, 1901 : 498). These are partial dwarfs (fore wing 12 mm against the normal 13–14 mm), the male hind wing being dull blue instead of shining, and lacking the orange costal stripe usual in this subspecies. Three other males in the main series have the orange stripe obsolescent, and it is thought that these are intermediates to dwarfs.

The clinal area between subspecies *melisa* and *scaeva* lies between Ranawng and Perlis, on the northern boundary of which I have taken a female of the latter.

Material examined.

Myrina melisa Hewitson, lectotype ♂, Burma: south, Moulmein.

Burma: 47 ♂, 42 ♀, Moulmein area southwards; Thailand: south, 1 ♂, 1 ♀ (dwarfs), [xii. 1890] (*W. Doherty*).

Drupadia scaeva scaeva (Hewitson) **comb. n.**

(Pl. 3; figs 79, 80, 83, 84)

Myrina scaeva Hewitson, 1863 : 30, pl. 15, figs 39, 40. Holotype ♂, Singapore (BMNH) [examined].
Biduanda scaeva (Hewitson); Nicéville, 1890*b* : 210, pl. E, fig. 7, ♀.
Biduanda scaeva (Hewitson); Seitz, 1926 : 988, pl. 159, figs f2, f3.
Biduanda scaeva scaeva (Hewitson); Corbet, 1940 : 6.
Marmessus scaeva scaeva (Hewitson); Corbet, 1956 : 351, 479.

There seems little significant difference between the continental Malayan, Sumatran, and Bornean specimens of this species, except that the females from Sabah have brighter markings below.

The male upperside fore wing patch, white in *D. s. cyara*, obsolete in *D. s. cooperi* and *melisa*, here reappears as a silvery blue, matching the hind wing. The female is the usual dark brown with the tornal third of the hind wing bluish white. The underside is chequered, brown to chocolate-brown on white, instead of etched in outline, with the female fore wing apex more orange than in the male. The fore wing length is normally 12–14 mm, but a fine large pair from Pulo Tioman, of 15 mm, has been shown me by Mr G. C. Stubbs, and both he and Mr J. A. Hislop have dwarf males from the peninsula, of 10 mm, similar to one in the BMNH from Sumatra. These have no blue patch on the fore wing and, of course, no lobe on the fore wing or brand on the hind wing, and the hind wing blue is restricted and dull. They appear to be straightforward examples of the dwarf phenomenon discussed above under *D. ravindra*, and again below under *D. cineas*.

Corbet first established the conspecificity of *scaeva* and *melisa*, but he did not correct the names on Seitz's plates. In 1956 (p. 479) he asserted that *Myrina scaeva* must have been taken by Wallace on Mount Ophir and not in Singapore, but this is by no means certain. There was plenty of jungle (and tigers) on Singapore island in Wallace's day, and this species is not confined to mountains. I have taken both sexes in swampy jungle just above sea level in south-east Johore.

MATERIAL EXAMINED.

Myrina scaeva Hewitson, holotype ♂, SINGAPORE [*A. R. Wallace*].

WEST MALAYSIA: 10 ♂, 1 ♀, throughout the peninsula; 1 ♂, 1 ♀, Pulo Tioman, x. 1958, vii. 1958 (*G. C. Stubbs*) (in coll. Stubbs); Selangor, 1 ♂ (dwarf), Genting Sempak, 28.iv.1957 (*G. C. Stubbs*) (in coll. Stubbs); Trengganu, 1 ♂ (dwarf), Kuala Tahan, 22.i.1958 (*J. A. Hislop*) (in coll. Hislop); Langkawi Is, 1 ♀, 21.i.1939 (*J. N. Eliot*) (in coll. Eliot)[3]. INDONESIA: N.E. Sumatra, 16 ♂, 4 ♀ (1 dwarf ♂) [no localities]; W. Sumatra, 1 ♂, 2 ♀ [no localities]. EAST MALAYSIA: Sabah, 4 ♀; Sabah, 1 ♀, Apas, 21.vii.1961 (*T. Norman*) (in coll. Norman); Sabah, 1 ♂, x. 1918 (*Woollett*).

Drupadia cineas (Grose-Smith) **comb. n.**

(Text-fig. 9; Pl. 4, figs 85–92; Pl. 6, fig. 108)

[*Myrina cinesia* ♀ Hewitson, 1863 : 29, pl. 13, fig. 20. Misidentification.]
Sithon cineas Grose-Smith, 1889 : 318. LECTOTYPE ♂, here designated, EAST MALAYSIA: Sabah (BMNH) [examined].
Biduanda hewitsonii Druce, 1895 : 615. Holotype ♀, EAST MALAYSIA: Sabah (BMNH) [examined]. **Syn. n.**
Biduanda hewitsonii Druce; Druce, 1896 : 679, pl. 31, fig. 9 (♂).
Biduanda cineas (Grose-Smith); Moulton, 1911 : 163 [not seen by him].
Biduanda hewitsonii Druce; Moulton, 1911 : 163.
Biduanda hewitsonii Druce, var. *parva* Moulton, 1911 : 164. 1 ♂, 2 ♀ syntypes, EAST MALAYSIA: Sarawak (♂ in BMNH, ♀♀ not located) [♂ syntype examined]. **Syn. n.**
Hypolycaena cineas (Grose-Smith); Seitz, 1926 : 985 [not seen by him].
Hypolycaena hewitsonii (Druce); Seitz, 1926 : 985, pl. 146B, fig. e4, pl. 159, fig. h7 (wrongly as '*parva*').

The male upperside is shining bright blue with black margins of varying width, and with a subtornal white spot and white cilia on the hind wing (fig. 85, showing the large fore wing lobe). The female (fig. 88) is very dark brown, the hind wing with a white subtornal band in spaces 1 to 3 divided by dark veins, and white cilia. The underside (figs 89–92) is chalky white, shading at each wing apex to pale grey in the male and dull orange in the female, the hind wing marked with wavy postdiscal, and lunulate submarginal, black bands, the latter being centred by lunules of metallic shining blue. The normal fore wing length is 16–17 mm.

The remarkable dwarf, variety *parva* Moulton, whose fore wing may be as short as 12 mm, retains the normal upperside appearance in the female but in extreme males (figs 86, 90) is plain dark brown with a subtornal white spot on the hind wing and the black markings showing through from below. This male lacks brands and lobes, even in intermediates marked with blue (figs 87, 91), with a fore wing length of up to 15 mm.

Moulton's syntype male and 'female' of variety *parva* purport to be in the BMNH type collection. The male is a small intermediate with some blue on the upperside and fully agrees with the original description and data. But the 'female' is an extreme dwarf male, labelled Matang Road, 27.iv.1911. Moulton's two syntype 'females' were taken in October 1909, so the specimen in the BMNH

[3] This specimen was recorded by Corbet (1940 : 6) as *D. s. melisa*. It is intermediate, and discovery of the male from Langkawi may prove it a new subspecies.

cannot be one. I do not designate the male as lectotype because one of the two syntype 'females', if found and if likewise extreme dwarfs, would be preferable. The genitalia of both specimens in the BMNH have been examined, and appear identical in size and shape to those of normal males.

Dwarfs, combined with Hewitson's misidentification of the female *Myrina cinesia* (the last species below), have confused the nomenclature. Hewitson commented that, oddly, his female was smaller than the male. Grose-Smith had before him one normal male and one male dwarf. Assuming that they were a pair neatly conforming to the same peculiarity, he described them as male and female. His syntypes, long lost, have been rediscovered in the Rothschild collection (figs 85, 86, 89, 90). I now designate the male syntype (figs 85, upperside; 89, underside) as lectotype of *Sithon cineas* Grose-Smith. The type locality is Mount Kina Balu, Sabah (Grose-Smith, 1889 : 312).

Druce described a normal female, rightly equating it with that of *Myrina cinesia* as described in error by Hewitson, naming it *Biduanda hewitsonii*, which thus is a subjective synonym of *Sithon cineas* Grose-Smith. In the following year he described and figured a normal male under the same name. Both his specimens, labelled as 'types', are in the BMNH, but the latter is, of course, not a primary type. Druce remarked on Grose-Smith's odd 'female', and asserted that there must be two species. Moulton followed him, and so did Seitz, neither being able to identify *Sithon cineas* Grose-Smith.

Dr T. Norman kindly let me see a series of about six males from Sabah which are intermediate dwarfs, all lacking male insignia and with varying amounts of blue on the upperside and with fore wing lengths about 14–15 mm. With only two such examples in the BMNH there was a possibility that '*Biduanda parva*' Moulton might be a good species, but these specimens give convincing proof that *Drupadia cineas* and its dwarf variety *parva* are yet another, and a good, example of the dwarfing phenomenon.

Material examined.

Sithon cineas Grose-Smith, lectotype ♂, East Malaysia: 'N. Borneo' [Sabah Kina Balu (*J. Whitehead*) from description]. *Biduanda hewitsonii* Druce, holotype ♀, East Malaysia: Sabah, Ellopura [=Sandakan] (*W. B. Pryer*). *Biduanda hewitsonii* Druce, variety *parva* Moulton, syntype ♂ [see text above], East Malaysia: Sarawak, Kuching, 26.vi.1900.

Paralectotype. *Sithon cineas* Grose-Smith, syntype '♀' [a ♂, var. *parva*], East Malaysia: 'N. Borneo' [Sabah, Kina Balu (*J. Whitehead*) from description].

Paratype. *Biduanda hewitsonii* Druce, paratype ♀ (and syntype misidentified paralectotype ♀ of *Myrina cinesia* Hewitson), East Malaysia: Sarawak [*Wallace*].

Indonesia: West Kalimantan, 1 ♂, Silat, Kelam, iii. 1910. East Malaysia: Sarawak, 1 ♂, 3 ♀ (various localities); Sabah, 9 ♂, 18 ♀ various localities).

Note. Mr J. A. Hislop recently sent me an accurate sketch of a good full-sized male which he found in S.E. Kalimantan, 'a day's journey up the Sentan river' [on the equator, about 117°E.], a useful extension of the range.

Drupadia cinesoides (Nicéville) **comb. n.**

(Text-fig. 11; Pl. 4, figs 93, 96; Pl. 6, fig. 109)

Biduanda cinesoides Nicéville, 1889 : 166, pl. A, fig. 7. Holotype ♂, West Malaysia: Selangor (not located).
Biduanda cinesoides Nicéville; Nicéville, 1890*b* : 211, pl. E, fig. 8, ♀.
Biduanda cinesioides Nicéville; Nicéville & Martin, 1896 : 480.
Hypoycaena cinesioides (Nicéville); Seitz, 1926 : 986, pl. 159, figs c2, c3.
Ritra cinesia cinesoides (Nicéville); Corbet, 1956 : 348.

The male, well illustrated by Seitz, has a rather thinly scaled, pinkish blue upperside, with an ovate patch of modified scales round the bases of spaces 4 and 5 on the fore wing, and a black brand like that of *D. cinesia* round the base of space 7 on the hind wing. The undersides of this and the two remaining species, as well as the female uppersides, are like the male of *D. johorensis* (figs 94, 97). The fore wing length is 18–21 mm.

D. cinesoides and *D. johorensis* can be separated at a glance from *D. cinesia* since the last lacks the subtornal red bar at the dorsum of the hind wing underside. This small distinction covers an extreme difference in the male genitalia, which in *D. cinesia* (fig. 111) are small and compact, whereas they are very bulky in *D. cinesoides* (fig. 109) and *D. johorensis* (fig. 110). The 'red bar' in the last two is an infallible diagnostic, but although there must be some pre-historic connection between this bar and the 'red ribbon' of *D. rufotaenia*, the comparison is not a simple one. The red ribbon assists in separating some subspecies of *D. rufotaenia* from the larger, dimorphic, *D. ravindra*. The comparable species here are *D. johorensis* and the larger, dimorphic, *D. cinesoides*, but both have the bar. It is the further large dimorphic *D. cinesia* which lacks it. Moreover, *D. ravindra* and *D. rufotaenia* are everywhere compatriate. So are *D. cinesoides* and *D. johorensis*; but *D. cinesia*, so far as known, is totally allopatric.

De Nicéville described and figured a then unique male. In the following year he similarly published the female, also from peninsular Malaya, and later, with Martin, he reported the species as rare in N.E. Sumatra. His male holotype has not been located.

Material examined.

West Malaysia: 1 ♀, 'Perak' [no further data; possibly *H. Low*]; 1 ♂, Pahang, Fraser's Hill, 3.v.1959 (*G. C. Stubbs*); 3 ♀, Pahang, Genting Sempak, 28.iv.1957, 5.x.1958, 14.xii.1958 (*G. C. Stubbs*); 1 ♀, Johore, Lenggor, 9.v.1948 (*G. C. Stubbs*) (all in coll. Stubbs); 1 ♀, Perak, Kinta (*J. A. Hislop*); 1 ♀, Johore, Jemaluang (*J. A. Hislop*) (both in coll. Hislop). Indonesia: 1 ♂, N.E. Sumatra (*Martin*); 1 ♂, 2 ♀, N.E. Sumatra, Battack Mountains (*Martin*); 1 ♂, Sumatra (*Evans*); 1 ♂, 'N. Borneo' (ex coll. Fruhstorfer).

Note. I do not think Fruhstorfer himself collected the last listed specimen, and strongly suspect that the locality label is wrong. Fruhstorfer did not know this species, and did not mention it in his thorough *Uebersicht* of 1912. Seitz does not give Borneo for the species, and I think the specimen was probably from 'N.E. Sumatra (*Martin*)'.

Drupadia johorensis (Cowan)

(Pl. 4, figs 94, 97; Pl. 6, fig. 110)

Marmessus johorensis Cowan, 1958 : pl. 4, (p. 87). LECTOTYPE ♂, here designated, West Malaysia: Johore (BMNH) [examined].
Drupadia johorensis (Cowan); Nieuwenhuis, 1969 : 218, figs 16, 17.

The species was named by accident. Editorial policy was not to introduce new names, so my description of the brown pair taken *in cop.*, both resembling the female *cinesoides*, was altered. But the name was not deleted from the plate, which suffices to validate it. Of the pair, I now designate the male as lectotype of *Marmessus johorensis* Cowan.

Originally, only the pair and another female, all from low-lying jungle in Johore, were known. When the peculiarities of the genus were realized, more males were quickly found in old series of female *D. cinesoides* from peninsular Malaysia and from Sumatra.

Described in the key and figured; the fore wing length is 17–18 mm.

Material examined.

Marmessus johorensis Cowan, lectotype ♂, West Malaysia: Johore, 36 miles N.W. of Johore Baharu, 200 ft, 2.i.1937 (*C. F. Cowan*).

Paralectotype ♀, taken *in cop.* with lectotype; same data.

West Malaysia: Johore, 1 ♀, Kangkar Dohol, 50 ft, 7.viii.1938 (*C. F. Cowan*); Negeri Sembilan, 1 ♂, Tampin, 16.iii.1920 (*J. W. Scharff*); Pahang, 1 ♂, Frasers Hill, 17.x.1933 (*J. E. Kempe*); 1 ♂, 1 ♀, Genting Sempak, 22.i.1957, 7.iv.1957 (*G. C. Stubbs*) (in coll. Stubbs); Indonesia: W. Sumatra, 1 ♂, Padang Bovenlanden, Batang Proepoe (*Van der Poll*); N.W. Sumatra, 1 ♂, Atjeh, Meulaboh, 17.i.1954 (*R. Straatman*) (in Rijksmuseum van Natuurlijke Historie, Leiden).

Note. Mr E. J. Nieuwenhuis of Rotterdam, who detected the last specimen listed, very kindly arranged for me to examine it.

Drupadia cinesia (Hewitson) **comb. n.**

(Text-fig. 10; Pl. 4, figs 95, 98; Pl. 6, fig. 111)

Myrina cinesia Hewitson, 1863 : 29, pl. 13, figs 18–20. LECTOTYPE ♂, here designated, East Malaysia: Sarawak (BMNH) [examined].
Biduanda cinesia (Hewitson); Druce, 1895 : 614.
Biduanda cinesia (Hewitson); Moulton, 1911 : 163.
Hypolycaena cinesia (Hewitson); Seitz, 1926 : 986, pl. 146B, figs g1, g2.

This species is apparently confined to Borneo, where neither of the last two species occurs.

The male upperside is much darker, and more blue, than that of *D. cinesoides*, and the fore wing lacks the discal brand. The female, and the underside, are of exactly the same pattern as the last two species except that the hind wing subtornal 'red bar' is lacking from the underside. The fore wing length is 18–22 mm.

The male genitalia are very different. Extremely small compared with most of the genus (and of more normal Lycaenid size), they approach those of *D. ravindra*, and are a link with the *Cheritra* pattern, notably the isolated *Cheritrella truncipennis* Nicéville (Cowan, 1967 : pl. 3, fig. 25), which almost match for size.

Hewitson described and figured both sexes simultaneously, but they are different species. The syntypes are in the BMNH. Druce was the first reviser, describing the correct female and then proposing the name *Biduanda hewitsonii* for the original misidentified species. In formal confirmation of this I now designate Hewitson's male syntype as lectotype of *Myrina cinesia* Hewitson.

MATERIAL EXAMINED.

Myrina cinesia Hewitson, lectotype ♂, EAST MALAYSIA: Sarawak [*Wallace*].

EAST MALAYSIA: Sarawak; 1 ♂, Bidi, vii. 1907 (*C. J. Brooks*); 1 ♀, Kuching; Sabah; 12 ♂, 18 ♀, Kina Balu; 1 ♀, Lawas (*Everett*); 1 ♀, Ellopura [Sandakan] (*Pryer*); 1 ♂, 2 ♀, 'N. Borneo'. BRUNEI: 1 ♂, 1 ♀ (no data) (*Waterstradt*).

SYNONYMIC LIST OF *DRUPADIA*

For simplicity, national divisions are omitted; 'Borneo' is used for the whole island, and 'Malaya' is used for West Malaysia.

DRUPADIA Moore, 1884	
Biduanda Distant, 1884	
[*Marmessus* Nicéville, 1890. Misapplication.]	
achaja (Fruhstorfer, 1912)	Thailand.
ravindra corbeti **nom. n.**	Pulo Condor (South Vietnam).
lisias (Fabricius, 1787)	
ravindra boisduvalii Moore, 1884	Burma, Thailand, Vietnam.
alcira (Fruhstorfer, 1912)	
ravindra moorei (Distant, 1882)	Malaya, Sumatra, Borneo.
similis (Druce, 1895) **syn. n.**	
sumatrana (Fruhstorfer, 1912) **syn. n.**	
battakana (Fruhstorfer, 1912) **syn. n.**	
nola (Fruhstorfer, 1912) **syn. n.**	
ravindra serunica (Eecke, 1914)	Simeulue Is.
ravindra caesarea Weymer, 1887	Nias Is.
niasicola (Staudinger, 1889) (nec *niasica*)	
comla (Swinhoe, 1912)	
ravindra batuna (Riley, 1944)	Batu Is.
ravindra connexa (Riley, 1944)	Siberut, Sipora Is.
ravindra esla (Swinhoe, 1912)	N.W. Sumatra.
iskander (Fruhstorfer, 1912) **syn. n.**	
ravindra sumptuosa (Toxopeus, 1931)	W. Sumatra.
ravindra janus (Riley, 1944)	S.W. Sumatra.
ravindra ravindra (Horsfield, 1828)	Java.
medullia (Fruhstorfer, 1912)	
javanica (Toxopeus, 1932) **syn. n.**	
transiens (Kalis, 1933)	
ravindra balina (Fruhstorfer, 1914)	Bali.

ravindra banka (Riley, 1944)	Bangka Is.
ravindra lisiades (Fruhstorfer, 1912)	Central Borneo.
ravindra fulminans (Staudinger, 1889)	E. Borneo.
atra (Druce, 1896) **syn. n.**	
ravindra surindra (Druce, 1895)	N.E. Borneo.
ravindra joloana (Staudinger, 1889)	Sulu Is.
albula (Druce, 1895) **syn. n.**	
ravindra ravindrina (Staudinger, 1889)	Palawan Is.
ravindra resoluta **subsp. n.**	Philippines.
rufotaenia archbaldi (Evans, 1932)	S. Burma.
rufotaenia rufotaenia (Fruhstorfer, 1912)	Malaya.
rufotaenia alcyma (Riley, 1944)	S.W. Sumatra.
rufotaenia caesia **subsp. n.**	Nias Is.
rufotaenia kina **subsp. n.**	Borneo.
rufotaenia torquata **subsp. n.**	Palawan Is.
rufotaenia praecox **subsp. n.**	Philippines.
cinderella **sp. n.**	Borneo.
cindi **sp. n.**	Borneo.
araotina (Evans, 1933)	Malaya.
abnormis (Moulton, 1911)	Borneo.
theda fabricii Moore, 1884	Burma, Thailand.
imitata (Druce, 1895)	
theda renonga (Corbet, 1938)	Thailand peninsula, Langkawi Is.
theda thesmia (Hewitson, 1863)	Sumatra, Malaya.
minara (Fruhstorfer, 1912)	
theda demialba (Staudinger, 1889)	Nias Is.
theda batunensis (Fruhstorfer, 1912)	Batu Is.
theda albicans (Riley, 1944)	Sipora, Siberut Is.
theda pagiensis (Riley, 1944)	N. Pagi Is.
theda fulgens **subsp. n.**	Bangka Is.
theda umara (Fruhstorfer, 1912)	N.E. Borneo.
depicta (Fruhstorfer, 1912)	
theda vanica (Fruhstorfer, 1912)	S. Borneo.
theda unicolor (Staudinger, 1889)	Palawan.
theda theda (C. & R. Felder, 1862)	Philippines.
theda thaliarchus (Staudinger, 1888)	N. Sulawesi.
inexpectata (Ribbe, 1926) **syn. n.**	
theda namusa (Hewitson, 1863)	S. Sulawesi.
naenia (Hewitson, 1863)	
theda bangkaiensis (Ribbe, 1926)	E. Sulawesi.
niasica scudderii (Doherty, 1889)	S. Burma.
niasica biranta (Riley, 1942)	Langkawi Is.
niasica perlisa (Riley, 1942)	Malaya.
niasica niasica (Röber, 1886)	Nias Is.
niasica ianthina **subsp. n.**	Batu Is.
niasica karnyi (Riley, 1944)	Mentawei Is.
niasica dohertyi (Riley, 1944)	S.W. Sumatra.
niasica ultra **subsp. n.**	S. Borneo.
niasica thaenia (Druce, 1895)	N.E. Borneo.
niasica florens **subsp. n.**	Philippines.
estella nicevillei (Doherty, 1889)	S. Burma.
estella semperna (Corbet, 1944)	Malaya.
estella estella (Hewitson, 1863)	Sumatra, Borneo.
scaeva cyara (Hewitson, 1878)	Sikkim.

scaeva cooperi (Tytler, 1940)	N. Burma, N. Thailand.
scaeva melisa (Hewitson, 1869)	S. Burma, S. Thailand.
scaeva scaeva (Hewitson, 1863)	Malaya, Sumatra, Borneo.
cineas (Grose-Smith, 1889)	Borneo.
hewitsonii(Druce, 1895) **syn. n.**	
parva (Moulton, 1911) **syn. n.**	
cinesoides (Nicéville, 1889)	Malaya, Sumatra.
johorensis (Cowan, 1958)	Malaya, Sumatra.
cinesia (Hewitson, 1863)	Borneo.

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Junior synonyms, variety and form names are in *italics;* misspellings are in quotes. New names, and page numbers referring to main descriptions, are in **bold** type.

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PLATE 1

Representative subspecies of *Drupadia ravindra;* males
Figures 16–27, uppersides; 28–39, undersides. Scale × ·80.

Figs	16, 28	*D. rav. caesarea*	Nias Is. (*Fruhstorfer*)
	17, 29	*esla*	N.W. Sumatra, Padang (*Ericsson*)
	18, 30	*boisduvalii*	Central Burma, Karens (*Mackwood*)
	19, 31	*fulminans*	E. Sabah, Sapagaya (*Cator*)
	20, 32*	*batuna*	Batu Is. (*Kannegieter*)
	21, 33*	*sumptuosa*	W. Sumatra, Lebong Tandai (*Brooks*)
	22, 34	*moorei*	Malaysia, Perak (*Doherty*)
	23, 35	*surindra*	Sabah, Melaman (*Woollett*)
	24, 36	*connexa*	Siberut Is. (*Kloss & Smedley*)
	25, 37*	*janus*	S.W. Sumatra, Marang (*Doherty*)
	26, 38	*ravindra*	W. Java, Depok
	27, 39	*joloana*	Jolo Is. (*Fruhstorfer*)

Notes. * not previously illustrated.

Fig. 22: specimen selected to show obsolescent fore wing flush.
Fig. 23: specimen selected showing blue fore wing streaks.


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PLATE 2

Representative species of *Drupadia;* males (except three noted)
Upperside above, underside below, in each pair of figures.

Figs 40, 44	*D. achaja*	N. Thailand, Phrae (*Godfrey*)
41, 45*	*araotina* ♀ Ht.	W. Malaysia, Selangor, Po. Angsa (*Evans*)
42, 46*	*ravindra moorei* dwarf	Singapore (*Cowan*)
43, 47	*rufotaenia rufotaenia*	Singapore (*Cowan*)
48, 51	*abnormis* ♀ Pt.	Sarawak, Gunong Klingkang.
49, 52*	*ravindra resoluta* Ht.	Philippines, Mindoro (*Everett*)
50, 53*	*theda fulgens* Ht.	Bangka Is. (*Hagen*)
54, 58*	*cinderella* Ht.	Sarawak (*Smeaton-Stuart*)
55, 59*	*cindi* Ht.	Sabah (*Pryer*)
56*	*cindi* ♀ Pt.	Sabah (*Pryer*)
57, 60*	*estella semperna* Ht.	W. Malaysia, Frasers Hill (*Eliot*)

Ht. = Holotype. Pt. = Paratype. * Not previously illustrated

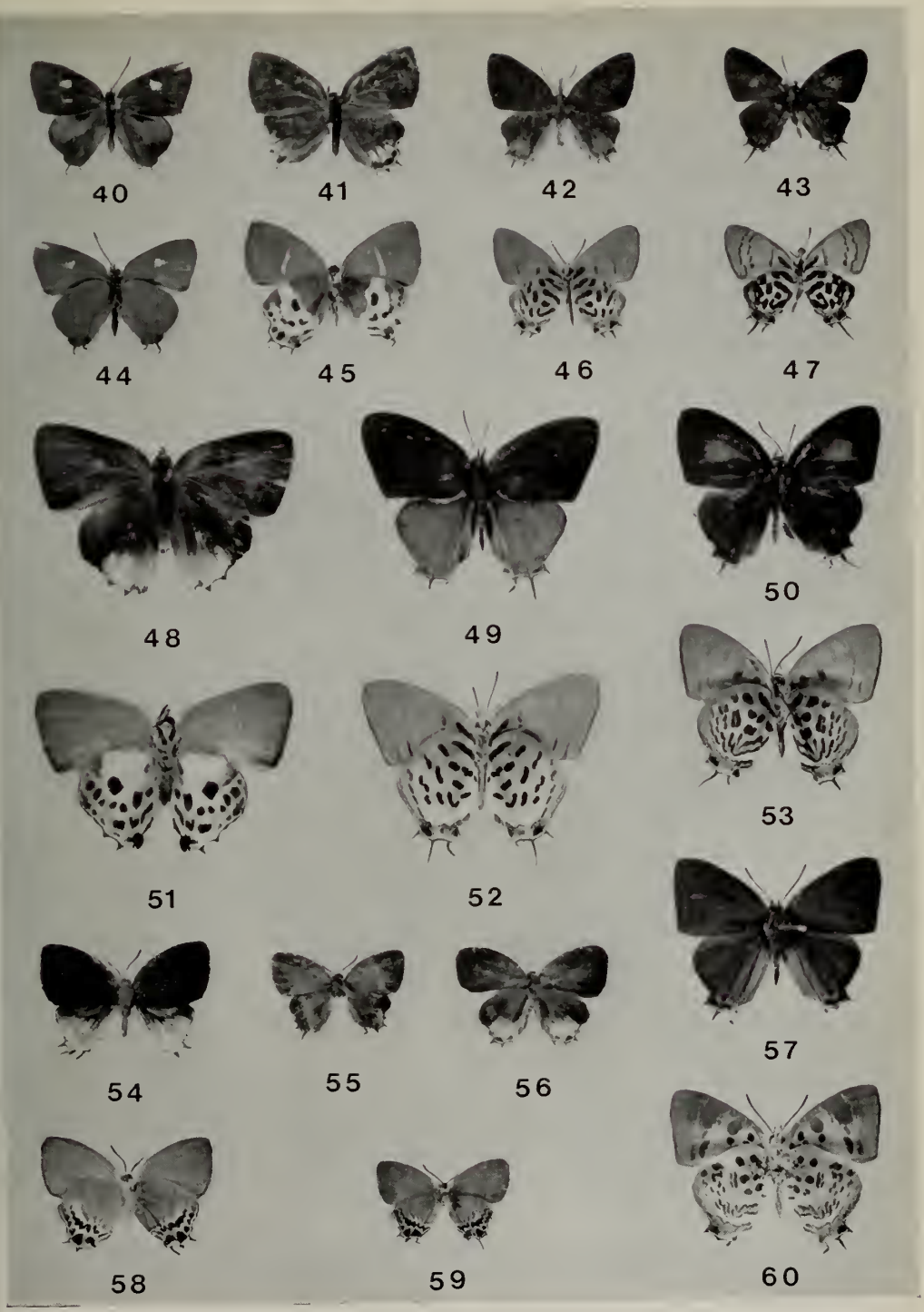
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PLATE 3

Subspecies of three rare *Drupadia* species; males

Figs 61, 65*	*D. rufotaenia* caesia Ht.	Nias Is. (*Raap*)
62, 66*	*kina* Ht.	Sabah, Kina Balu (*Waterstradt*)
63, 67*	*torquata* Ht.	Palawan (*Cator*)
64, 68*	*praecox* Ht.	Phillippines, Mindoro (*Everett*)
69, 73	*D. niasica niasica*	[Nias Is.]
70, 74*	*ianthina* Ht.	Pulo Telo (*Kannegieter*)
71, 75*	*ultra* Ht.	S. Kalimantan, Po. Laut (*Doherty*)
72, 76*	*florens* Ht.	Mindanao, Lanao (*Wileman*)
77, 81	*D. scaeva cyara*	Sikkim, Gangtok (*Eliot*)
78, 82	*melisa*	S. Burma, Mergui (*Evans*)
79, 83	*scaeva*	Sabah (*Woollett*)
80, 84*	*scaeva* dwarf	W. Malaysia, Pahang (*Hislop*)

Ht. = Holotype. * Not previously illustrated

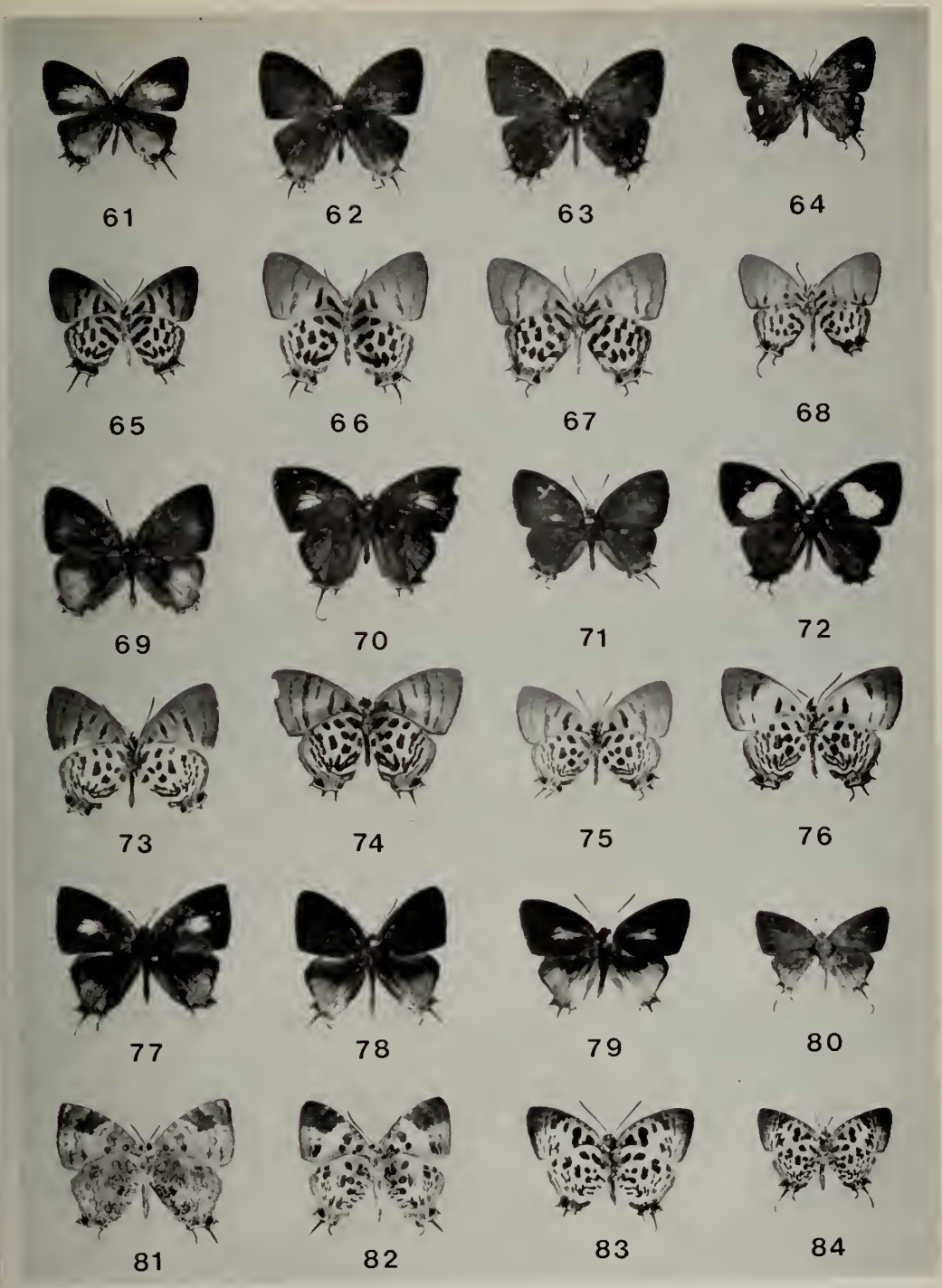
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PLATE 4

Four further species of *Drupadia;* males (except one noted)

Figs 85, 89	*D. cineas* Lt.	Sabah, Kina Balu (*Whitehead*)
86, 90	*cineas* '♀' St. ♂ var. *parva*	
87, 91	*cineas* intermediate var.	Sarawak, Kuching.
88, 92	*cineas* ♀	Sarawak, Lawas (*Everett*)
93, 96	*cinesoides*	N. E. Sumatra (*Fruhstorfer*)
94, 97	*johorensis*	W. Sumatra, Batang Proepoe (*Van der Poll*)
95, 98	*cinesia*	Sabah, Kina Balu

Note. The first two specimens are Grose-Smith's '♂ and ♀ types' of *D. cineas* Grose-Smith. Of these syntypes the former is designated as lectotype. The second is a ♂ var. *parva*, which has not previously been illustrated.

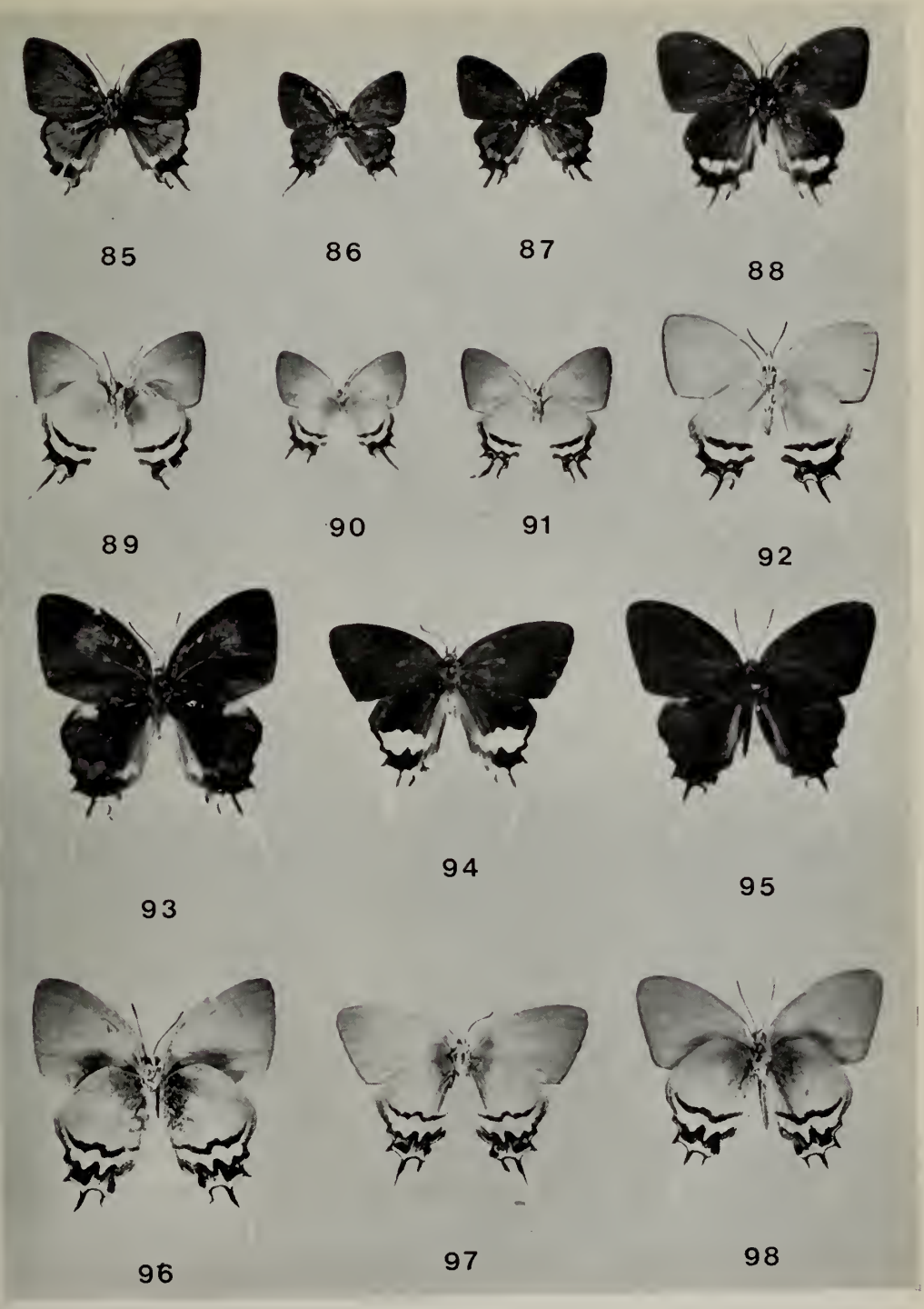
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PLATE 5

Male genitalia of *Drupadia*

Fig. 99	*D. achaja*	Slide NHB1555	Thailand
100	*ravindra*	NHB 1514	Sabah
101	*rufotaenia*	ASC 46–252	Singapore
102	*cinderella*	NHB 2421	Sarawak
103	*cindi* Ht.	Hope/NHB 2478	Sabah
104	*theda*	NHB 1475	Mindanao
105	*niasica*	NHB 1465	Mindanao

Notes. In figs 102, 104, 105 the vesica is everted; in others it is continent.

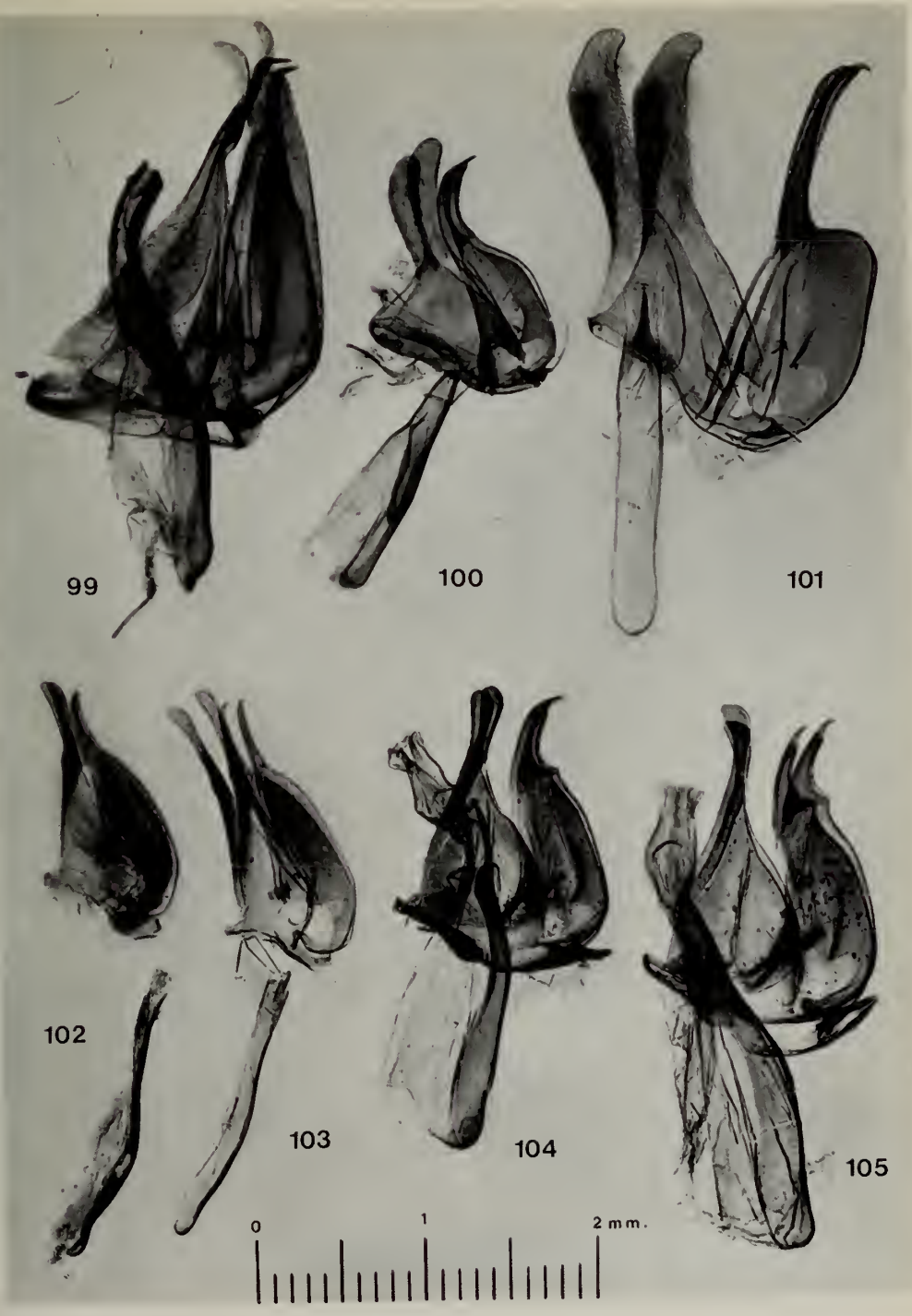
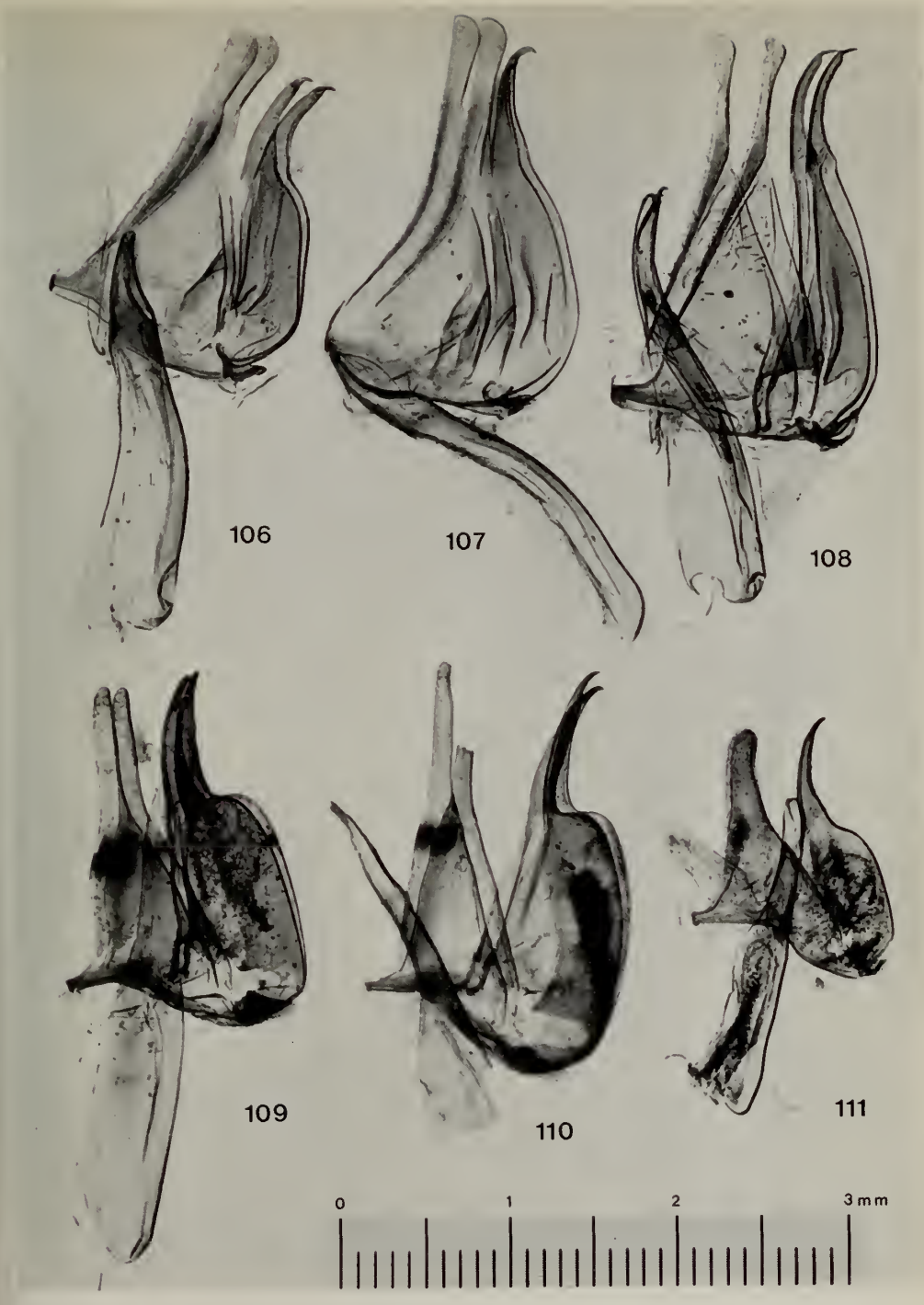

99
100
101
102
103
104
105
0
1
2 mm.

PLATE 6

Male genitalia of *Drupadia* (contd)

Fig. 106	*D. estella*	Slide no.	NHB 2454	Sabah
107	*scaeva*		NHB 1478	N.E. Sumatra
108	*cineas*		NHB 1438	Borneo
109	*cinesoides*		NHB 1429	'Borneo' [N.E. Sumatra]
110	*johorensis* Ht.		NHB 1421	Malaysia, Johore
111	*cinesia*		NHB 1422	Borneo

Note. In figs 109, 110 the vesica is partially everted.


106
107
108
109
110
111
0
1
2
3 mm